The Mining Journal
AND ATMOSPHERIC RAILWAY GAZETTE,

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 549.---Vol. XVI.] LONDON: SATURDAY, FEBRUARY 28, 1846. [Price 6d.

TO IRONFOUNDERS, &c.—HELEN IRON-WORKS, near BERWICK-UPON-TWEED.—TO BE SOLD, BY PUBLIC AUCTION (unless disposed of by private bargain, of which due notice will be given), all those well-known and newly-erected WORKS (without reserve), on Tuesday, the 10th March next, at Two o'clock in the afternoon, in the King's Arms Hotel, Berwick-upon-Tweed, and which, to secure competition, and wind up the affairs of the concern, will be put up at the

UNPRECEDENTEDLY LOW SUM OF £2700.

These works have been built in the most solid and substantial manner, regardless of expense, and consist of large and lofty moulding shops, furnished with numerous cranes, two cupolas, capable of melting 8 to 10 tons an hour; two steam-engines, of 6 and 12-horse power; large boring-mill, and self-acting slide lathe, 24-inch headsticks, and 24-ft. long; several other lathes; drilling and screw-cutting machines; saw and loam mills—all driven by machinery. Three large fire-proof stoves; a railway, with inclined plane and platform, upon which the materials for the furnaces are drawn by steam-power; dressing shops; long sheds, for holding boxes, &c. Three newly-erected coke ovens; large and lofty warehouses; counting-houses, &c., all of which are lighted with gas, and amply supplied with water, which is carried through the premises in pipes.

It is not within the compass of an advertisement to point out the advantages which these works have over others in the country, for supplying the local, London, and other markets with castings, for which, at no other period, has there been so great a demand, and which is certain to be still further increased; they could be put into full operation in two or three weeks, being in perfect working order—a better opportunity having been SELDOM PRESENTED TO THE IRONFOUNDER OR CAPITALIST desirous of engaging in this branch of manufacture.

ON THE FOLLOWING DAYS,

The BOXES, PATTERNS, MOULDERS' TOOLS, including all the IMPLEMENTS and MATERIALS used in an iron foundry, with a stock of CAST-IRON GOODS,

WILL BE SOLD, BY AUCTION.

These consist of several hundred tons of moulding boxes, or flasks and patterns used for making rain, gas, and water pipes, girders, tanks, steam-engine, and other machinery castings; pots, chests, house gutters, round and square ovens; stove metal, and other castings sold in the London market; gun carriages, platforms, and other articles required by the Board of Ordnance; gas apparatus and retorts, used by London Gas Companies; girders, columns, railway bars, and an immense variety of others, too numerous to mention.

ALSO, ABOUT SIXTY TONS CORE BARRELS,

For rain, gas, water, and hot-water pipes, &c., of malleable and cast-iron; together with the MOULDERS' TOOLS, consisting of crane and hand ladles, slings, wrought and cast-iron beams, chains, shovels, &c.

The patterns will be found of the most valuable description, being almost all new; the castings from which have been found correct, and a great part suitable for the London market; they have been prepared with the greatest care and accuracy, at vast expense, from drawings and models furnished by engineers, and by some of the first houses in the iron trade in London.

The Sale to commence at the Works each day at Twelve o'clock.

Plans of the works, and catalogues of the boxes, patterns, &c., may be had, by applying to

Robert Guthrie, Fenchurch Chambers, London.
D. Macbeath, Berwick.
Coxwell and Croser, Newcastle-upon-Tyne.
Bankier and M'Kenzie, Glasgow.
Joseph Hubback, Liverpool.
J. B. Gallie, Edinburgh. 1

MINE MATERIALS FOR SALE.—Mr. NICHS. TREVENA has received instructions to SELL, BY AUCTION, at EAST POOL MINE, in the parish of Illogan, on Tuesday, the 10th of March, by Eleven o'clock in the forenoon, the under-mentioned SPARE MINE MATERIALS:—

1 9-feet 15-inch pump	2 10-feet 9-inch windbore
1 9-feet 14-inch ditto	1 6-feet 12-inch ditto
1 9-feet 13-inch ditto	H-piece and top-door
12 9-feet 12-inch ditto	A capstan and shears
13 9-feet 9-inch ditto	10-inch capstan rope—about 100 fathoms in length
1 4-feet 9-inch ditto	2 horse-whims
5 9-feet 7-inch ditto	A boiler tube—a balance-bob
4 10-feet 8-inch working barrels	Lot of old scrap-iron
2 6-feet 9-inch door-pieces	Ditto cast-iron
1 8-inch H-piece and top-door, with stuffing-box and glands to fit.	Ditto brass

The auctioneer begs to call the attention of mine agents and others to the above materials, a large portion of which are nearly new.—Dated Feb. 18, 1846. 2

WHEAL LOPEZ MINE, BICKLEIGH.—VALUABLE and EXTENSIVE ASSORTMENT of MINING MATERIALS.—TO BE SOLD, BY AUCTION, by D. H. HAINSSELIN, on Tuesday, the 10th March, 1846, and following days, at WHEAL LOPEZ MINE, Bickleigh, seven miles from Plymouth, all the VALUABLE AND EXTENSIVE ASSORTMENT OF MATERIALS, lately used in working the said mine. 3

Comprising a capital 40 ft. water-wheel, with 3 ft. 6 in. breast; a superior 39 ft. water-wheel, 6 ft. breast with iron ring; an excellent water-wheel 9 ft. 6 in. diameter and 9 ft. breast, with drawing machine, &c.; a crushing machine and floor; a set of 3 head stamps and wheel; iron windlas, capstan and beam; sheers and pullies; several hundred fathoms of flat and round rope; about 60 tons of superior iron, in bishops' heads; bob gudgeons; chairs; staples; strapping plates; rolls; rails and railway saddles; stuffing boxes and gland; H-pieces and clacks; pullies; bucket rods; angle bob; loggerheads; cramps; cylinder case; sweeps, bob chains, and rod plates; rod loops; pullies; round and square rods; wrapping bonds; rod plates; planch pins bolts; castings; rings, &c.; SEVERAL LIFTS OF SUPERIOR 17 in. 15 in. and 10 in. PUMPS; door pieces; wind bores; working barrels; clacks; matching pieces; several wood pumps; excellent oak and other timber; launders; plank; ladders; roofs of machine houses; saw pit; carpenter's bench; blacksmith's bellows and forges; anvils; vices; screw plates; screwing stock; horse and other tools; iron kibbles; beam and scales, with stand and weights; triangle and blocks; miner's tools; new shovels; a superior THEODOLITE; six bags of nails; 3 cwt. gunpowder; leather; old rope; grinding stones; and a useful assortment of other articles calculated for mining purposes.

The whole of the above being in excellent condition, is strongly recommended to mining agents and others, who may inspect the same six days before the sale, on application to Capt. Edwards at the mine, of whom catalogues may be had; of the auctioneer, No. 1, St. Aubyn-street, Devonport, or of Mr. Boswarva, Sussex-street, Plymouth.

The Plymouth and Dartmoor Railroad runs through the sett, by which a cheap conveyance can be had to Plymouth if any of the materials should be bought for shipment.

Sale to commence each day precisely at Eleven o'clock. An early attendance is respectfully solicited as the lots are numerous and valuable.

REFRESHMENTS WILL BE PROVIDED.

1, St. Aubyn-street, Devonport, Feb. 18, 1846.

NEWTOWNARDS LEAD MINE.—TO BE SOLD, BY PUBLIC AUCTION, at the Odd Fellows' Hall, Douglas, Isle of Man, on Thursday, the 12th day of March next, at Twelve o'clock at noon, in lots, ONE HUNDRED and NINETY-ONE SHARES of the NEWTOWNARDS LEAD MINE, in the county of Down, Ireland. This mine embraces the whole of the town lands of Whitespots; has lately been extensively opened, and furnished with sufficient machinery to extend the workings for many years; is now in a remunerative state, with every prospect of immediate further improvement, and consists of 598 shares, held under lease from the Marquis of Londonderry, for an unexpired term of 18 years, from the 1st November last, and a life, now six years of age, yielding a royalty of 1-10th. The youth having a strong constitution, and the families noted for longevity, causes the property to be valuable, and worthy the notice of mining adventurers. 4

TO IRONFOUNDERS.—TO BE LET, entry at Whitsunday, the OAK BANK FOUNDRY, on the banks of the canal at the Old Basin, now possessed by the London Vulcan Foundry Company, will BE LET to a respectable tenant, for a term of years, at a moderate rent. It consists of two large moulding shops, two cupolas, an engine of 8-horse power, and is capable of furnishing castings of nine tons weight. There are two good double-power cranes, with a great variety of moulding boxes, core bars, a variety of excellent wheel patterns, engine and machinery patterns, and other foundry utensils; also smithy and wright's shop adjoining.

FOR SALE, AT THE PREMISES.

One new side lever CONDENSING-ENGINE, of 30-inch cylinder and 3-feet stroke, with malleable iron crossheads, crosstails, and parallel motion, substantially and well fitted.
One 4-horse portable CONDENSING CISTERN ENGINE.
One segment fly-wheel, 18-feet diameter, 8¾ tons weight, fitted.
Two heavy clay-mill rollers, finished with table, shafts, and wheels. 5
One self-acting turning lathe, 18-feet bed—width on the bed 19 inches, and heads 16 in., slide rest and chucks, with apparatus for cutting screws of various pitches—on the construction of Mr. Fox, of Derby.
A condensing steam cylinder, cased, interior diameter 27½ inches and 6-feet stroke, with coupled slide valves, nossils, cylinder cover, metallic piston, and piston-rod.
Three sugar-mill rollers; driving roller, 3 ft. 10 in. long, 24½ in. diameter, scrap malleable iron gudgeon journals, 8 in. diam. and 11 in. long, square 6¼ in. and 10 in. long. The journals of the other two rollers 6¼ in. diameter, and 9½ in. long, square 7¼ in., and and 10¾ in. long. These rollers are 4 ft. 3½ in. long over the flanges, all turned and fitted.
One set of shifting gear, for a crane jib.
A large quantity of Spigot and Faucet pipes, chiefly 4 and 5 in. diameter.
A Bramah pump, for proving pipes.
Several sets of iron tackle blocks, and a few shifting spanners.

Apply to Mr. Neilson, the proprietor, at Oak Bank.
Glasgow, Feb. 12, 1846.

FIR TREES.—TO BE SOLD, A LARGE QUANTITY OF SCOTCH FIR TREES, FIT FOR MINING PURPOSES, varying from 2, 3, and 5 feet of timber in each tree, and from 10 to 15 feet long.—Price from 1s. 6d. to 3s. 9d. per tree, to be delivered in Sutton Pool, Plymouth Harbour, to any vessel.—For further particulars, application to be made to Mr. Crace, Plympton St. Mary, Devon. Also a large collection of STONES, &c.—The whole for cash payments. 6

TO IRONMASTERS AND OTHERS.—TO BE SOLD, a THIRD, or ONE-HALF, of a respectable, safe, and lucrative business, in an article of daily consumption in the IRON TRADE; obtained in large quantities, situate close to a shipping port, and held under a long lease, upon advantageous terms. The object of the advertiser is to extend the trade (for which there are great facilities), by an increase of capital. The perfect security of the trade established will be fully proved, and how it can be advantageously increased. If desired, the purchaser would be permitted to take an active part in the management of the concern.—Principals, giving real name and address, will meet with immediate attention by inquiring, by letter only, of "A. B.," care of Mr. Hunnard, 2, Inner Temple-lane, London. 7

MINERALS IN LANARKSHIRE TO SELL, OR LET.— The MINERALS on the farms of GILL and HAYHILL, lying in the parish of East Kilbride, and county of Lanark, situated about seven miles south of Glasgow, and midway between the villages of Kilbride and Eaglesham. These properties are known to contain LIMESTONE and CLAYBAND IRONSTONE, which can both be wrought by mining. The ironstone on these properties was wrought and smelted in Clyde Iron-Works upwards of 50 years ago, but was discontinued, in consequence of the distance and difficulty of conveyance at that late period. The newly projected line of railway from Glasgow to Lesmahago will pass through the properties, and it is understood that a depôt will be formed at or contiguous to the properties, and will thereby afford great facility of transit. The estate extends to above 100 acres, and every facility in point of time will be allowed to prove it by searches and otherwise.

For further particulars apply to Dr. Alston, East Kilbride. 8

MINERAL PROPERTY FOR SALE.—An ESTATE, containing COAL, IRONSTONE, FIRE CLAY, and BUILDING STONE.—These have all been opened into and partially worked, and conveyed over a railroad and canal seven miles, to a port for shipment: 100 acres are freehold and 80 acres leasehold, for a long term, at a small fixed rent; 56 acres of freehold land, with a limestone quarry and kiln contiguous to the above, may be included or not in the purchase.

Application to be made, by principals only, to W. T. Meakin, Esq., 6, Albion-place, Blackfriars-road, London. 9

GLAMORGANSHIRE.—Fourteen Miles from CARDIFF.— TO BE LET, ON LEASE, THREE SEAMS of superior COAL, lying under 800 acres of land—through the middle of which the Taff Vale Railway passes. There is also a canal communication, by which this coal could be delivered at the port of Cardiff for 6s. per ton, all charges included. It is presumed this situation is not to be surpassed in eligibility, when the flat position, extent, and pure coking quality, of the coal are considered.

Inquire of Messrs. Crowder and Maynard, 45, Coleman-street, London; of Mr. W. P. Struvé, civil engineer, Swansea; or to view the premises, of Mr. David Davies, Gellywhyon, Newbridge, Glamorganshire. 10

TO BE SOLD, OR LET, SEVERAL valuable VEINS of BITUMINOUS and ANTHRACITE COAL, IRON, LEAD ORE, and FIRE CLAY, lying under extensive estates in the counties of Glamorgan, Carmarthen, and Brecon. The coal and minerals may be easily wrought, at a small expense; they lie within convenient distances of seaport and market towns; and are, to a great extent, workable by level. The South Wales and other projected lines of railway are intended to pass through or near the greater portion of the estates. The property commands eligible sites for the erection of iron-works, and possesses the advantage of having a constant supply of water-power at command.—For further particulars apply to Mr. John Morgan, land and mineral agent, and surveyor, Swansea. 11

LAMERHOOE WHEAL MARIA COPPER MINE:
ROSCARROCK SILVER-LEAD MINE:
WHEAL MARY SILVER AND COPPER MINE:
WHEAL WALTER COPPER AND LEAD MINE:
WHEAL CONCORD LEAD AND COPPER MINE:
WHEAL BRAY COPPER MINE:
WHEAL WEEKES COPPER MINE:
WHEAL KELLY LEAD AND COPPER MINE:
WHEAL BRADSTONE LEAD AND COPPER MINE:
WHEAL DUNTERTON COPPER MINE: 12

The BUSINESS of the ABOVE MINES is now CONDUCTED at No. 4, KING-STREET, CHEAPSIDE, where specimens may be seen, and all particulars obtained.

Dated Feb. 26, 1846. JAMES CROFTS, Secretary.

ASTURIAN MINING COMPANY.—The board of directors hereby give Notice, that they have made a further CALL of ONE POUND per share upon the shares held in the capital stock of this company, and that such call is PAYABLE to the company's bankers, Messrs. Hankey & Co., or the London and County Joint-Stock Bank, on or before the 1st of April next. The directors remind the shareholders, that the non-payment of the call subjects the shares to forfeiture. 13

G. COLQUHOUN, Chairman.
9, Austinfriars, Feb. 26, 1846. R. MACKENZIE, Secretary.

NOTICE TO THE PROPRIETORS AND SHARE- HOLDERS OF MINES, SMELTING-WORKS, &c.

Messrs. MITCHELL and FIELD beg to inform the PUBLIC, that they have REMOVED from No. 5 A to No. 23, HAWLEY-ROAD, KENTISH TOWN, where they have erected a spacious LABORATORY, fitted expressly for the performance of all OPERATIONS CONNECTED WITH MINING.—Practical instruction to gentlemen in Assaying, Mineral Analysis, and Manufacturing Chemistry in general.

Assays and Analyses conducted as usual. 14

All communications to be addressed to Messrs. Mitchell and Field, assayers, No. 23, Hawley-road, Kentish Town.

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall. 15

BY HER MAJESTY'S ROYAL LETTERS PATENT.

SMART'S ELLIPTICAL CONVEX METALLIC PADDLE FLOATS, FOR PROPELLING STEAM-SHIPS.—The very great superiority of this invention over the common float, in *all points*, having been fully proved by its use on various steamers of from 90 to upwards of 300-horse power—and applications being made for licensing several iron steamers, from 70 to 300-horse power, the patentee confidently recommends it to the Government and the public generally.

Its superiority consists, in beauty of appearance, stability, durability, its property of greatly reducing vibration and undulation, inexpensiveness, powerful agency in checking a ship in chance of collision—and what is of the greatest consequence, giving an immense increase of speed. All these must have a powerful influence, not only on steam proprietors, but more especially on the minds of the steam-travelling public. 16

These Floats can be easily applied to any wheel.

Applications for license (for which a fee of 10s. per horse-power is charged) to be made to the patentee, Mr. Robert Smart, 5, Greaville-place, Hotwells, Bristol, or his agents.

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. 17

DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

RAILWAY GREASE.—RAILROAD CONTRACTORS, MINING AGENTS, and OTHERS, who require a FINE CHEAP GREASE for HEAVY BEARINGS, are requested to TRY JOSEPH TURNBULL'S ANTI-FRICTION GREASE, which is proved by scientific men to surpass all others for its lubricating qualities, and for cheapness.—Samples and price, per return of post, by applying to F. Taylor, No. 45, Munster-square, Regent's-park, SOLE AGENT FOR LONDON; or H. Singleton Bodmer, and Co., Marble-street, Manchester. 18

P.S.—Single and double jacks, to raise from two to twenty tons, at wholesale prices.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public.

References to scientific and practical men can be given, and testimonials shown of its [illegible] excellence.—Samples forwarded on application at the manufactory, Green-street, [illegible]-street, Blackfriars-road, London. 19

PAYNE'S PATENT PROCESS FOR THE PRESERVATION AND IMPROVEMENT OF TIMBER, &c.—PAYNE and LODER beg to invite the attention of Engineers, Railway Companies, Architects, and others, to the ABOVE PROCESS, and to state that they are prepared to ERECT the necessary APPARATUS in any part of the United Kingdom, where the quantity is sufficiently large to cover the outlay of its removal.—Further particulars can be obtained at WHITEHALL WHARF, CANNON-ROW, WESTMINSTER, or at their other stations—

FLEETWOOD-ON-WYRE, LANCASHIRE, UNION WHARF, SOUTHAMPTON, and
WISBEACH, CAMBRIDGESHIRE, GUILDFORD, SURREY. 20

RYE AND THOMAS, MINE AGENTS AND DEALERS IN STOCKS, RAILWAY AND OTHER SHARES,
80, OLD BROAD-STREET, LONDON, AND AT LISKEARD, CORNWALL. 21

JAMES LANE, SHARE AGENT,
HALL OF COMMERCE, LONDON. 22

WILLIAM TRENERY, DEALER IN RAILWAY AND MINING SHARES.—ESTABLISHED TEN YEARS.
OFFICES, No. 80, THREADNEEDLE-STREET, LONDON. 23

WILLIAM FOX AND SON, No. 53, CASTLE-STREET, LIVERPOOL, have always on SALE PIG-IRON, RAILWAY BARS, CHAIRS, and IRON of every description.—TIN PLATES, WIRE, &c. 24

MESSRS. LAMOND, SMALE, and LAMOND'S PUBLIC SALE OF RAILWAY SHARES, &c., are HELD, at the Hall of Commerce, Threadneedle-street, every TUESDAY and FRIDAY, at One o'clock precisely.—Orders received until Four o'clock of the day prior to sale.—London, Feb. 20, 1846. 25

STEAM TO INDIA VIA EGYPT, MALTA, ITALY, ALEXANDRIA, AND THE PENINSULAR PORTS.

PASSAGE TO BOMBAY, MADRAS, AND CALCUTTA.

The Peninsular and Oriental Steam Navigation Company BOOK PASSENGERS for CEYLON, MADRAS, and CALCUTTA direct, by steamers leaving Southampton on the 20th, and for Alexandria, *en route* to Bombay, on the 1st of every month.

A steamer from Southampton leaves the 1st and 20th of every month for Malta, whence are steamers to Naples, Genoa, Civeta Vecchia, three times a month.

STEAM TO CORUNNA, OPORTO, VIGO, LISBON, CADIZ, AND GIBRALTAR. 26
A steamer leaves Southampton on the 7th, 17th, and 27th of every month.

Apply at the Peninsular and Oriental Steam Navigation Company's offices, 51, St. Mary Axe, London, where only passages can be secured throughout.

LONDON AND WESTMINSTER BANK.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the proprietors of this company will be HELD at the Bank, in Lothbury, on Wednesday, the 4th day of March next, at One o'clock precisely, to declare a dividend, and for other purposes.—At this meeting Joseph Eadaile, Esq., John Stewart, Esq., M.P., and Sir John Kirkland, retire by rotation; but, being eligible for re-election, offer themselves accordingly. 27

By order of the board,
Lothbury, Jan. 21, 1846. JAMES WILLIAM GILBART, General Manager.
The transfer books will be closed, to prepare for the dividend, from Feb. 17 to March 10

HAYLE RAILWAY COMPANY.—Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of the proprietors of this company will take place at the company's offices, 35, Broad-street-buildings, London, on Tuesday, the 3d of March next, at Two o'clock in the afternoon, for general and special business, and also for the election of two directors, in the place of those retiring by rotation. S. D. FLEMING, Secretary. 28

35, Broad-street-buildings, London, Feb. 12, 1846.

ARMAGH, COLERAINE, AND PORTRUSH, AND ARMAGH, COLERAINE, AND PORTRUSH EXTENSION RAILWAY.—The committee of management of these companies have much pleasure in acquainting their shareholders, that they have effected an AMALGAMATION with the DUBLIN, BELFAST, AND COLERAINE JUNCTION COMPANY, on terms mutually advantageous to all parties. The only essential difference between the two schemes—the Armagh, Coleraine, and Portrush, and the Dublin, Belfast, and Coleraine Junction, and which hitherto prevented a union between the two companies, was, that the former line commenced at Armagh and terminated at Portrush, whilst the latter commenced at Portadown and terminated in a like manner at Portrush—being joined at Stewartstown by the direct line from Armagh. It will be seen, therefore, that, with the exception of that portion of the Dublin, Belfast, and Coleraine Junction trunk line from Stewartstown to Portadown—a distance of about 15 miles—the two schemes are in every other respect similar, commencing and terminating at the same point.

Under these circumstances, the committee unanimously, with the full concurrence of the engineers of both companies, and of Mr. Rastrick, to whose judgment the matter was referred, agreed to the adoption of the Dublin, Belfast, and Coleraine Junction line, with the exception of that portion of the trunk line from Stewartstown to Portadown, which is abandoned, whilst the branch from Dungannon to Portadown will bring the main line in direct communication with the Dublin and Belfast Junction Railway on the one hand, and at the terminus at Armagh on the other, with the Ulster and Newry and Enniskillen Railways.—The committee may congratulate their shareholders on being saved the expense and uncertainty of a Parliamentary contest, and of an amicable arrangement having been come to on such terms as will be found perfectly satisfactory. 29

By order, T. W. YOUNGHUSBAND, } Secretaries.
28, Threadneedle-street, Feb. 20, 1846. WM. GALT, }

SLIGO AND SHANNON RAILWAY AND SHIP CANAL. —The attention of the committee of management of this company having been directed to the letter of the *Times'* Commissioner, of the 26th inst., on the development of the "Industrial Resources of Ireland," think it desirable to submit to their shareholders the following remarks, on the scheme for connecting the River Shannon with the seaport of Sligo, referred to in his letter. The following is the extract alluded to:—

"A canal, of four miles, from the lower part of Lough Earn, at Ballack, to Ballyshannon, would open out a navigable water communication from sea to sea, across the whole country—from Belfast on one side, to Ballyshannon on the other. This would necessarily afford means of getting to markets with produce cheaply, and means of obtaining manure cheaply—this would promote industry, increase the produce of the soil, and necessarily increase wealth; and, in doing so, tend to remove some subjects of Irish complaints. From Sligo, across Lough Gill, to Lough Allen, a 10 miles canal would open the whole interior of the country to the sea at Sligo, at one end, and to the sea at Kerry, at the mouth of the Shannon, at the other—and with, of course, the same benefits."

The committee of this company are happy to find that the Commissioner so fully confirms their views as to the vast importance of connecting Lough Allen with the seaport of Sligo—"that it would open the whole interior of the country to the sea at Sligo, at one end, and to the sea at Kerry, at the mouth of the Shannon, at the other." The importance of a work like this cannot be overrated, and the committee are fully alive to the excellence of the undertaking, both in a national and a commercial point of view.

The great utility of this scheme may be judged of from the fact of the Legislature having voted £700,000, for the purpose of improving the navigation of the River Shannon; of this sum about half a million has been already expended, and the remaining sum will complete the improvements in rendering the Shannon navigable to the quay at Lough Allen and the termini of the company's railway. This work will be completed in the summer of 1847—the Shannon will thus be navigable for steamers of 150-horse power, for a distance of 160 miles from the quay, at Lough Allen, to Limerick, and thence to the sea, 77 miles further; and, when the Sligo and Shannon Railway and Canal is completed, Sligo will become the port of the Upper Shannon and of the populous and wealthy towns bordering on it. 30

It is truly observed, that, completing the communication between Lough Allen and the port of Sligo, will open the whole of the interior to the sea at Sligo, as, by this means, the chief part of the produce of the counties of Westmeath, Longford, Leitrim, Roscommon, Cavin, &c., will pass over this line and through the canal; the towns of Athlone, Roscommon, Lanesborough, Longford, Roosky, Tarmon, Newtonforbes, Drumsna, Carrick, Leitrim, Drumshambo, and all the other towns contiguous to the River Shannon, will, by this railway and canal, be brought into connection with the port of Sligo, and, consequently, their imports and exports will be transmitted by this route.

The committee, under the best engineering advice, consider their plan of a canal, to connect Lough Gill with the port of Sligo, as preferable to a railway; but, with reference to connecting Lough Allen with Lough Gill, they beg to observe, that, so far back as the year 1793, it was proposed to connect Lough Allen and Lough Gill by means of a canal; and Mr. Nimmo, the eminent engineer, was employed by Government to report on the expediency of the work; from his report it appeared, that the number of locks required would so detract from the usefulness of the work, that the idea was abandoned.

Subsequently, when public attention became so much directed to railways, a strong and unanimous feeling was entertained by the inhabitants of the west of Ireland, that a railway, to connect Lough Gill and Lough Allen, and a ship canal from the harbour of Sligo to Lough Gill would be the best means of opening the communication between the Shannon and the Atlantic, and resolutions to that effect were passed by the grand jury of the counties of Sligo and Leitrim, by the Sligo Harbour Commissioners, and at different public meetings held in these counties; it may be added, that more than one-third of the shareholders in this company are residents of the town of Sligo—the best criterion of the value of the scheme.

It is to be observed, that the ship canal from the harbour of Sligo to Lough Gill, which will be less than a mile in length, will enable ships of 500 tons burthen to load or discharge their cargoes at the terminus of the railway, and thus the timber ships from America, bound for the eastern coast of Ireland, will be enabled to avoid the most tedious and dangerous part of the voyage, and pass direct from sea, and discharge their cargoes at the terminus of the railway; from the terminus at Lough Allen, the timber can be floated down the whole length of the Shannon, supplying the different towns on the route.

From the foregoing, it will be seen that the scheme is more comprehensive than the one originally proposed—of merely connecting Lough Allen and Lough Gill by canal—as the communication between the sea and the interior of Ireland will be now rendered complete, and the expense and delay of a second shipment of goods avoided by means of the ship canal. The committee take this opportunity of informing the shareholders, that the bill has passed the Standing Orders Committee of the House of Lords without opposition.

By order, W. R. ORMSBY GORE, Chairman.
A. GOLE, Secretary.
Winchester House, Old Broad-street, Feb. 27, 1846.

POTATO DISEASE AND THE NEW SETS.—The EVIDENCE already collected on this unfortunate subject, is given in the "GARDENERS' CHRONICLE" of Saturday last. The *Gardeners' Chronicle*, EDITED BY Professor LINDLEY, may be had, by order, of all newsvenders, price 9d., stamped, to go by post.—Office for advertisements, 5, Upper Wellington-street, Covent-garden. 31

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—*Carrig Tapinson, Feb.* 20.—The lode in the 18 fm. level end, west of flat rod shaft, is 18 in. wide, producing 3 tons per fm.; eastern end, 2 ft. wide, producing 3 tons per fm. In the eastern end, on middle lode, we have intersected the north part of the lode, heaved south by a slide; it is thinly mixed with lead, but of no value. The lode in Nangles shaft is 4 ft. wide, producing 2 tons per fm.; the end east from this shaft is producing 2 tons per fm.; the end west is suspended for the present, from the increase of water, the feeder being too large for our hand lift. We shall ship from 35 to 40 tons of lead this week.—THOMAS ANGOVE.

BEDFORD UNITED.—Feb. 24.—I beg to hand you my report of these mines. At Wheal Marquis we are still driving by the side of the lode in the 80 fm. level east. The lode in the 70 fm. level east is 3 ft. wide, composed of gossan and spar; this level is now very near the cross-course; on approaching which, in all the upper levels, the lode has invariably decreased in value, as also is it the case in this instance. The lode in the stopes, in the back of this level, is 18 in. wide, and worth 10*l.* per fm.; and in the winze in this level the lode is 2 ft. wide, and worth 12*l.* per fm. In the 58 fm. level east the lode is about 3 ft. wide, worth 8*l.* per fm., and promising improvement. The south lode, in the 47 fm. level west, is 12 in. wide, and unproductive. At Ding-Dong there has been no lode taken down in the 24 fm. level west. The quantity of tin broken, and now in course of stamping and dressing, is from 10 to 12 tons, of a fair average quality—at the present price of tin, worth from 40*l.* to 50*l.* per ton. We hope to have some cleaned and made marketable about the end of April. At Wheal Tavistock the lode in Phillips's engine-shaft is 2 ft. wide, composed of mundic, spar, and ore. In the 35 fm. level east the lode is at present split; in this level west the lode is 2 ft. wide, composed of mundic, prian, spar, and ore; altogether very kindly.—J. PHILLIPS.

CALLINGTON.—Feb. 23.—Johnson's engine-shaft is sunk 2 fms. below the 112 fm. level; in cross-cutting towards the lode, at this level, the ground is hard. In the 100 fm. level driving south we have a very promising lode—the back will set at 5*s.* in the 1*l.*; in the north end we are also opening good tribute ground. The 90 fm. level, driving to the lode, is improved, and will now pay for driving the end; the back of the north end will set at 9*s.* in the 1*l.*—the ground is hard. The north engine-shaft is now 7 fms. below the 90 fm. level; at this level, both north and south, we are driving through ground that will work at 6*s.* in the 1*l.* In the 80 and 70 fm. levels we are opening ground that will set at 10*s.* in the 1*l.*—the prices are given on the value of the lead. The pitches on the copper lode are looking well, especially the one in the bottom of the 70 fm. level. We are now driving, at the 80 fm. level, to get under this; the lode is about 8 in. big, with spots of copper, where the tributers are sinking; in the bottom of the 70 the lode is 2½ ft. big, the orey part 1 ft.—worth a ton of ore per fm. We sampled, on the 20th inst., 101 tons of silver-lead ores, and have now ready for sale 25 tons of copper ores.—J. T. PHILLIPS.

EAST TAMAR CONSOLS.—I beg to hand you the report of the above mines. At Whitson, in Hitchins's engine-shaft, we have cleared 8 fms. under the 36 fm. level, but no appearance of the bottom—although, I think, we are not far from it. At the south shaft we are clearing the 36 fm. level towards Furzehill, to make a convenient barrow-road, to bring the work from the stopes to the shaft. At Furzehill we are clearing the 30 fm. level south, where we have discovered a breast-ground lode, looking very promising. Our pitches are looking very well, and we are getting on in our dressing department as fast as possible.—B. ROBINS.

GREAT WHEAL WILLIAMS.—Feb. 25.—We have driven about 5 fms. since my last report; the ground is favourable for driving; the lode is larger than it was, about 2½ ft. wide, with a very promising appearance. We are not doing anything in the other part of the sett, owing to the weather.—B. COOKE.

GUNNIS LAKE.—Feb. 24.—At Chilsworthy the lode in Bailey's engine-shaft is about 2 ft. wide, composed of gossan and spar, with spots of copper ore in places. We have, for the past week, been costeaning south of Chilsworthy, for the purpose of laying open the backs of the south lodes in this sett, in a direction west of the old workings; but as yet one small branch only has been discovered.—W. RICHARDS.

HAWKMOOR.—Feb. 24.—The south engine-shaft is about 18 fms. 3 ft. below the surface; no lode taken down. The western engine-shaft is about 16 fms. 3 ft. below the surface; lode 15 in. wide, composed of spar and mundic, with spots of ore. The lode in the 15 fm. level, west of Hitchins's engine-shaft, continues unproductive; the lode in this level east is just the same as last reported, producing some saving work.—P. RICHARDS.

HOLMBUSH.—Feb. 24.—The ground in Hitchins's shaft, sinking below the 110 fm. level, is still hard. In the 120 fm. level cross-cut the ground is also hard. In the 110 fm. level, west of Hitchins's shaft, the lode is 12 in. wide, and worth 8*l.* per fathom; in the stopes in the back of this level, west of Hitchins's winze, the lode is 10 in. wide, and worth 10*l.* per fm. In the stopes west of the sump winze the lode is 12 in. wide, and worth 9*l.* per fm. The stopes east of Doidge's we have set on tribute at 8*s.* in 20*s.* In the 100 fm. level, west of Hitchins's shaft, on the north part, the lode is 20 in. wide, and worth 25*l.* per fm. In the 100 fm. level west, on the south part, no lode taken down since last reported; in driving south, on the lead lode, at this level, we have had a great deal of water issuing from the eastern side of the level, especially within the last 2 fms. driving, which induced us to cut in farther east; in doing of which, we intersected the main part of the lode, and got in it about 3 ft., and no eastern wall to be seen; the lode is composed of prian, soft spar, and several small branches of lead, varying in size from 2 in. and below; we shall, of course, continue to drive east until we are satisfied we have the eastern wall; and likewise to prove whether there is a counterpart of the copper lode we last discovered south, in this level (going east), or not. We have opened about 2 fms in length on that part of the lead lode last discovered; and it is just alike going north and south, above and below the level, and is apparently going north, behind the old level, which is timbered up; however, we shall be able, against another week, to report more fully on the direction and permanency of its character. In the 90 fm. level driving west, on the north part, the lode is 12 in. wide, producing stones of copper ore, and gradually improving, as did the 100 fm. level in the same part; ditto, driving south, on the lead lode, the lode is 2½ ft. wide, composed of flookan and spar, with spots of lead; we shall open some ground further east from the present end, at this level, to prove whether we have all the lode or not. In the 62 fm. level north the ground is favourable for driving. In the rise in the back of the 80 fm. level, against Bray's shaft, the lode is small, and poor.—W. LEAN.

LEWIS.—Feb. 21.—Kuskey's engine-shaft is 3 fms. 2 ft. under the 42 fm. level, ground favourable; the lode in the above shaft is 8 in. wide, producing some stones of good quality yellow ore, and very promising. The lode in the 42 fm. level end west is 2 ft. wide, a promising lode, producing some spots of tin; we are also extending our cross-cuts north and south at the 42 fm. level. Kuskey's lode in the winze, sinking under the 32 fm. level, is 18 in. wide, producing some spots of tin. Wheal Nutt engine shaft is 8 ft. under the 50 fm. level; the lode is 2 ft. wide, worth 4*l.* per fm. for tin. The lode in the 50 fm. level end east is 2½ feet wide, worth 6*l.* per fm. for tin; the lode in 50 fathom level end west is 2½ ft. wide, producing some tin. The lode in the 40 fm. level end east is 8 inches wide, yielding some tin; the lode in the 40 fm. level end west is 2½ ft. wide, producing some tin. The lode in the 30 fm. level end east is 2 feet wide, worth 3*l.* 10*s.* per fm. for tin; the lode in the 30 fm. level end west is 1 ft. wide, worth 30*s.* per fm for tin—a very promising lode. The lode in the 20 fm. level end east is 18 inches wide, producing some tin; the lode in the 20 fm. level end west is 18 inches wide, set at 10*s.* per fm., and 8*s.* in 20*s.* for saving the tin. The lode in the 10 fm. level end west is 2 ft. wide, set at 15*s.* per fm., and 8*s.* in 20*s.* for the tin. We are expecting to get in course for the burning-house, against the end of this month, about 9 tons of wilts. We have commenced taking out the foundation for a burning-house at Wheal Nutt, after the erection of which we shall be enabled to burn our tin in the mine at a much better advantage; we hope to get it in course for the next month's burning.—S. S. NOBLE.

NORTH WHEAL ROSE.—*St. Agnes, Feb.* 23.—Since my last, of the 9th inst., the weather has proved more favourable, and the pressure on the levels has not been so severe; the water also has abated very considerably, and I hope the month of March will see the mine progressing more steadily. The sale of the 14th has produced about 1120*l.*—prices being rather better than the preceding sale, but we want a larger monthly quantity; this, I hope, will be obtained from the 60, not yet cut, and the renewed workings of the old pitches, which, as I have in a previous report stated, have been seriously impeded by the continued rains.—W. CARNE.

SILVER VALLEY.—Feb. 23.—I beg to say, that the lode in the 80 fm. level driving west is 2 ft. wide, composed of capel, spar, and peach—producing a little tin work. The lode in the eastern end is 2 ft. wide, 1 ft. of which is saving work for tin. The lode in the 20 fm. level west is 2½ ft. wide, composed of capel, spar, peach, and mundic. The plunger-lift is fixed at the 30 fm. level, which has reduced the course of the engine to five strokes per minute. The shaftmen will now commence to divide and case the shaft from the 20 to the 30 fm. level—fix a penthouse there, and drop a lift to the bottom, in order for sinking the shaft. At the south shaft there has been but little done in the past week, as the water has been in, by reason of the engine being idle while fixing the lift in the north shaft. The small shaft is cleared up, and secured to the bottom, which is 11 fms. from surface, and the men have now commenced clearing the 10 fm. level, east and west of the same, on the course of the silver lode.—S. RICHARDS.

TAVY CONSOLS.—Feb. 25.—The deep adit at Little Duke is cleared to the shaft, which is perpendicular from grass about 50 fms.; there is a great deal of attle in the levels each side of the shaft. The whim is completed, and would have commenced working to-day, but all our men are engaged making floors, &c., at Hocklake, where we cut Williams's lode on the 18th instant; since that we have driven about 2 fms. on its course, from which we have raised about 5 tons of ore. We are now about 5 fms. below the surface, where the lode is 3 ft. wide, composed on the upper part of black and green ore; in the bottom of the end, and about 6 in. or 1 ft. up, it is composed of yellow, grey, and black ore, of which we have had two samples assayed by Mr. Penrose, of Tavistock, one producing 12, and the other 22, per cent.—B. COOKE.

TRELEIGH CONSOLS.—Feb. 21.—At Christoe shaft, below the 90, sinking in the country. At the 90, east of ditto, lode 20 in. wide, and worth 38*l.* per fm.; ditto, west of ditto, lode 20 in. wide, with stones of ore, and kindly—much improved. At Garden's shaft, below the 80, no lode taken down; we shall commence taking it down in a few days. At Good Fortune shaft, below the 70, lode about 3 ft. wide—looking rather kindly, with stones of ore. At the 70, west of ditto, lode nearly 3 ft. wide—very kindly, with stones of ore. At the 60, west of Symons's, lode 18 in. wide, producing a small quantity of ore. The 50 cross-cut north is hard, and very wet; I think we are near the lode, by the caples which we have. At the 50, west of Symons's, lode 2 ft. wide, with a small branch of ore, not of much value. At the winze below the 44, lode 1 ft. wide, rather poor. At the 34, west of ditto, lode small—no mineral. At the rise above the 20, lode 2 ft. wide, without ore. At the winze below the adit, lode 1 ft. wide, capely, with stones of ore.—W. SYMONS.

UNITED HILLS.—Feb. 24.—In William's shaft the lode is 2 ft. wide, good ore. In the 80 fm. level, eastern end, the lode is 4 ft. wide, 2 ft. ore of fair quality; western end, the lode is 3 ft. wide, unproductive. In the 70 fm. level, eastern end, we are still driving south; west of diagonal shaft, the lode is 3 ft. wide, producing but little ore; west of St. James's shaft, the lode is 2½ ft. wide, 18 in. ore of low quality. In the 60 fm. level, eastern end, the lode is 2 ft. wide, ore of average quality; in the stopes, east of Harper's winze, the lode is 2½ ft. wide, good ore; in the stopes, west of James's shaft, the lode is 5 ft. wide, 3 ft. ore of average quantity. In the 50 fm. level the ground is still hard for driving. At Wheal Sparrow, in the 50 fm. level the lode is 2 ft. wide, producing but little ore. In the 40 fm. level, eastern end, the lode is 18 in. wide, good ore, improved in quality since last week; in the western end the lode is 18 in. wide, poor. In the 30 fm. level the lode is 18 in. wide, orey throughout, of low quality.—THOS. TREVENEN. ROBERT WILLIAMS.

WEST WHEAL JEWEL.—Feb. 23.—We expect the water will be in fork to the bottom of the mine in a day or two from this time; we have resumed the 100 fm. levels, on Wheal Jewel lode. The 85 fm. level west, on the last-mentioned lode, is worth 8*l.* per fm. At the 70 fm. level west, on ditto, lode 9 in. wide, containing stones of ore. The ground in the 70 cross-cut south is without alteration. The 85 fm. level west, on Buckingham's lode, still unproductive. At the 80 fm. level east, on Morcom's lode, lode 2½ ft. wide, composed of spar, mundic, and spots of ore. At the 12 fm. level east, on Tolcarne tin lode, lode worth 6*l.* per fm.; nothing done in the 12 west in the past week, the men being employed in repairing Quarry shaft. At Wilkinson's engine-shaft, sinking below the 30 fm. level, lode 2½ ft. wide, containing occasional stones of ores. The lode in the deep adit west is very small.—S. LEAN. R. JOHNS.

WHEAL MEXICO (near Callington).—Feb. 20.—Yesterday we dialled the cross-course, and found it to be only 9 ft. from the present end of the 20 fm. level; the ground, however, is unfortunately much harder than it was last week. The north lode is considerably improved for copper, and some saving work has been taken up; price for driving, 35*s.* per fm. From the East Cornwall adit the tributers occasionally bring out a few bags of silver ores, of average produce. The sums received for our last parcels of silver ores amount to 87*l.* 19*s.* 2*d.* Altogether we have raised about 440*l.* worth from the shallow adit; the class of silver ores being muriate of silver, commonly called horn silver, intermixed with iron gossan.—W. KNOTT.

FOREIGN MINES.

THE BRAZIL MAIL.—The *Express* arrived at Falmouth on Thursday morning, with mails from Rio Janeiro, from whence she sailed on the 9th ult: she has on frieght 7000*l.* in gold and diamonds. Exchange at Rio upon London, 26¾ to 27 d.; upon Paris, 356; upon Hamburg, 660.

ALTEN MINING ASSOCIATION.—The following is an estimate of the ore produced in December, 1845:—

Mines.	No. of men.	Tons ore.	Per cent.	Tons copper
Raipas	24	63	7	4·41
United Mines	8	40	5	2·00
Mancur's	12	18	5	0·90
Ryper's	10	12	8	0·96
Old Mine	—	8	5	0·40
Total	54	141		8.67

Mining Report, from 29th Nov., to 15th Jan.

Raipas.—The prospects continue favourable, but during the dark days, a considerable part of the produce remains in the picking stuff, and cannot be returned before the summer. The quality of the ore returned to the smelting-house is improved, and the actual returns for the three months have already exceeded the estimates; proving by the result of the operations for that period, that the reports have not been exaggerated. In the 10 fm. level workings, the lode is more confined, and yields less ore, but the quality is improved, and the ore is less disseminated throughout the matrix. In the shallow adit workings, the lode still consists of gossan, and purple ore, mixed with clay, lime, and ferruginous quartz. From these workings, the principal part of the prills and best dredge is obtained, and from the quantity of purple ore in a minute state of diversion in the lode, we have been able to increase the per centage of the second dredge to 7, being 1½ per cent. above the deliveries at the close of our last year's operations.

United Mines.—The stopes have somewhat deteriorated; but the cost has also diminished in proportion to the produce. The workings at this mine continue to leave a fair profit. The tributers at Woodfall's, have lately experienced more difficulty in procuring the ore from the old stulls; in December they returned 18 tons of 5 per cent., at an expense of about $95. It will be necessary to increase the price now paid for the barrel of ore, but a good profit will still result from these operations.

Mancur's.—The stopes in the south-west sink, having fairly got into the most productive part of the lode, we have every reason to expect the produce of the present month will be materially increased. The winze under the adit, has been fluctuating in its produce, the ore is very partial, but good, and the lode small. The returns of copper from this working, will barely pay the cost; but, being close to, and dipping towards another lode, we thought it advisable to continue it, even at a trifling loss, until the junction is discovered, and its value determined.

Ryper's.—All the workings at this mine are confined solely to the cross lode. The quality of last month's produce was better than formerly, and a greater quantity of prills were broken from the stopes. The lode is again deteriorated, and the produce for the present month, must consequently experience a corresponding decrease. The returns of ore from the level have been very fluctuating, but the lode is regular and very promising, and as we approach the old workings at the surface, which were formerly very productive, we may expect an improvement.

Old Mine.—The greatest part of the stulls have now been picked over, and a large quantity of stamps stuff collected. All the operations at this mine, are for the present suspended; about 10 tons of good dredge are prepared for smelting, and will be returned in the course of this month.

Quarrig.—The small parcels of ore collected from the old workings on the several lodes, will be brought to the smelting-house in a few weeks. As these are principally sweepings, and small batches from the halvans, &c., the per centage will be low. I commenced working a series of maps and estimates to accompany a general report on the works; but, in consequence of the unusual dark days, have not been able to make any surveys since last November; even at the present time, we can do nothing in the middle of the day without candles or lamps. I hope however to recommence this work in a few days, and will forward the required report, estimates, and maps, as soon as completed. By comparing the estimates and returns of ore for the past three months, the latter will be found a little in excess—proving the result of our operations for the first quarter rather under, than over estimated, and I hope our future proceedings may be found equally favourable.—S. H. THOMAS.

Jan. 16.—I have this moment received a letter from Raipas, in which Capt. Monk, in describing a winze lately commenced in the shallow adit, says—"We have met with a bed of ore, which in my opinion is worth 50*l.* per fm., and though it is not pure enough for prills, yet upon the whole it is superior best dredge, every atom of which we are at present breaking from this place; its dip and direction are however very irregular, and on that account I dare not venture to commence a cross-cut from the 10 fm. workings to intersect it. The ground is very spudy and favourable for working."

IMPERIAL BRAZILIAN.—*Gongo Soco, Dec.* 13.—I am sorry to say my hopes of success in the 70 fm. level, at Vesey's shaft, have materially declined. The machinery seems now in a tolerable state of repair, and keeps the mine drained to the bottom. Mr. Williams's opinion is, in my esteem, of more value than the crude speculations of every native in this province. We are sinking below the 70 fm. level, by aid of a hand pump, on that part of the jacotinga which looked most favourable in the levels. I regret that present appearances are by no means so encouraging; but we shall continue so far as our power will allow us, and whilst hopes of success remain. The surface water now enables us to keep the mine thoroughly drained, and we are pr[illegible] our works in the 70 fm. level, with every practicable expedition. [illegible] to say, the appearances, at about 3 fms. below that gallery, seem to have somewhat declined. At Canta Galla, north of Morgan's shaft, and at the mountain side, east of the mine, we are still exploring, but hitherto without success. The rise above the 48 fm. level, east of Vesey's shaft, is for the present suspended, as the operations at the 70, keep the whim fully occupied. We have had a few hat caps of work for the washing-house from the shallow level, east of Bray's shaft; the other parts of the mine, unfortunately, call for no remark. At Catta Preta, Captains Blamey and Pengilly agree with me, that further proceedings in the cross-cuts near Brightman's shaft would but uselessly expend more money; we have, therefore, abandoned it, and the same men, who worked there, are now employed sinking a winze below the 10 fm. level, in the most promising part of the lode, between Thomas's and Alston's shafts. Thomas's shaft has been sunk about 5 fms. below the 10 fm. level, and we have intersected a bed of sand, which obstructs us very much. The flat was at Fitzpatrick's ready, and we wait only some iron for the other parts, which I still hope to see in operation by the year's end. I have great pleasure in bearing testimony to the excellence of Capt. Pengilly's general arrangements, which, I hope, will shortly enable him to dispense with some of his force, and thus reduce the now heavy current expenditure. *Dec.* 23.—At Catta Preta, I am happy to say, the sinking of Thomas's shaft goes on well, as we have, for the present, overcome our difficulties there; the winze, below the 10 fm. level, between Thomas's and Alston's shafts, has been sunk about 2 fms.; and, although the lode contains gold, it is far from rich. Expecting the pumps at Fitzpatrick's shaft to be ready by the year's end, we are extending the 20 fm. level towards the lode. I hope a few posts more will afford me the pleasure of reporting more vigorous proceedings. I am sorry to say this mine presents nothing new; the stuff from the vein, north of Morgan's shaft, is in course of proof at the stamps, and hitherto has been very poor. Our cross-cut, north of Allcock's shaft, at the 21 fm. level, has intersected a vein, which shows a sample of gold, and we have commenced driving westward on it. A quartz vein, showing a particle or two of gold, has been cut in the 27 fm. level cross-cut, south of Lyon's shaft. By the aid of a hand pump, we have sunk about 5 fms. below the 70 fm. level, east of Vesey's shaft; but appearances, I regret to say, are by no means encouraging. At Canta Galla, and on the Rigo eastward, we are without alteration.—W. J. HENWOOD.

Gold Report.

	From the stamps.	Total raised.
Dec. 3 to 10	lb 9 10 5 0	lb 10 5 4 0
11 to 20	7 0 17 0	7 8 8 0
Seventeen days' working	lb 18	1 12 0
Total produce from 1st July	lb 143	11 15 0

ST. JOHN DEL REY.—*Morro Velho, Dec.* 18.—Heads working, during 18 days, 68·9. The supply of ore has been sufficient for the stamps, without picking, but it has not been ample. The Bahu sump end of the United Mines, and the hard Quebra Panella stopes, are the only places worked, and both are poor and scanty in the boring and breaking. The Cachoeiras are being worked throughout. Less ore is being broken here, in consequence of so much sinking and driving, and opening out of the sides, going on; the object at present is to ease the stoping in this mine, in order to allow the new sump shaft to overtake the old bottom of the mine—until this be accomplished, the Cachoeiras will be in order to supply the quantity of ore they are capable of doing. The Gamba is being feebly worked, until the remainder of the Catta Branca blacks arrive; the separate stamping of the Gamba ore (that is, the real average of the bottom of the working, 7 ft. wide, from end to end) is completed. 386·4 tons have produced 1205½ oits., without any picking. This mine, worked about the same width in 1840, yielded 4½ oits. per ton, also without picking. What it might do now by picking the ore, I do not know; but it will be tried the first opportunity. What we must endeavour to do, is to supply the stamps from the United Mines, and the Gamba, to the extent of picking the ores; and whatever quantity may be deficient for this purpose, make up from the Cachoeiras. This will be the speediest way of bringing the Cachoeiras into order, and when they are in order, the reverse operations should be adopted—that is, working the Cachoeiras to the extent of their capabilities, and sparing the United Mines. The Cachoeira new drawing shaft is completed, and a new whim will soon be ready to draw there before the end of the month, I trust; after which, we may soon make a commencement of new pumping machinery, the wheel of which will come from the Catta Branca. The heaviest part of the whole work will be the excavation and building up of the wheel pit, which will be some 30 ft. deep. In any case this work must, and will, be pushed on with every energy.

CONDURROW MINING COMPANY.—At a meeting of adventurers, held on the 12th inst., a call of 15*l.* per share was made—10*l.* payable immediately. The accounts stated the balance due the purser, at end of August, as 60*l.* 7*s.* 11*d.*; the labour cost for Sept., Oct., Nov., Dec., and Jan., 924*l.* 6*s.* 5*d.*; the merchants' bills for same time (including 36-in. cylinder steam-engine, with boiler complete), 1932*l.* 18*s.* 8*d.*; lord's dues, 17*l.* 3*s.* 7*d.*—together, 2919*l.* 15*s.* 7*d.* By call of 5*l.* per share Sept. 3, 640*l.*; ore, &c., sold, October 2, 134*l.* 15*s.* 3*d.*; ditto, Dec. 4, 166*l.* 18*s.* 3*d.*; tin sold, Jan., 41*l.* 19*s.* 5*d.*—making 983*l.* 12*s.* 11*d.*; and showing the mine in debt, 1936*l.* 2*s.* 9*d.*

EAST POOL MINING COMPANY.—At the account, held on the 17th inst., the

cost for December and January was shown as		£321 19 9
By copper ores sold Dec. 4 (less dues 17*l.* 8*s.* 10*d.*)	£506 0 11	
Tin sold (less dues 1-30th, 3*l.* 7*s.* 8*d.*)—debts, 5*l.*	103 3 9—609	4 8
Balance		£212 15 1
Cash in hand end of November		716 16 10
Now in hand		£504 1 11

By copper ores since sold, about 450*l.*; tin ore, now dressing, estimated at 500*l.*, for next account, which is calculated to meet the cost, but will depend upon the facility of burning that quantity of tin. The prospects of the mine are improving.

NORTH UNITED MINING COMPANY.—At a meeting of adventurers held on the 11th inst., the accounts, showing a balance of 150*l.* 6*s.* 11*d.* against the mine, having been examined and passed, it was resolved—"That, to pay off the above balance, and for the further prosecution of the mine, a call of 4*l.* per share be made, and paid to the purser on or before the 1st day of March next."—The following report from Capt. N. Hocking, dated Feb. 10, was read to the meeting:—"Since our last meeting we have sunk the engine-shaft to the 70 under the adit, divided and cased the shaft, cut a plat, &c. We have set 10 fms. below the 70 for 105*l.* The lode in this shaft is much the same as it has been from our commencement; it is as strong in iron as it ever was, and not quite so large, but large enough had it been copper instead of iron. I expect this 10 fms. will be down in six weeks from this time. In the 80 fm. level, under the adit, we have driven about 49 fms. west of the engine-shaft, and cut a north and south lode; since that we have driven south 7 fms.; the lode is from 18 in. to 2 ft. wide, and is as kindly a lode as I ever saw with so little mineral in it; there has been black oxide of copper in the lode ever since we cut it, but not sufficient to save; in driving on this lode we shall cut other lodes that are before us, one of which we expect is not more than 20 fms. from us; the ground on this lode is from 45*s.* to 50*s.* per fm., and is a kindly speculation. On the north lode we have sunk the shaft about 13 fms. below the 60 fm. level; the ground in this shaft is not so hard as it was; the lode appears to be quite in a confused state; sometimes we break good stones of copper in the shaft, and at other times there is scarcely any to be seen; when the lode increases in size the quality is better, and when it is small, poor. The only reason I can give for this is, that our shaft is going down in a hard strata of ground, and it is very evident that there is softer ground east and west of the shaft. When our shaft is down to a proper depth, we must drive both east and west to give the lode a fair trial; we purpose doing so when the shaft is 16 fms. below the 60 fm. level; this we expect will be done by the middle of next month. In driving the 60 fm. level, east of the north shaft, we have cut the guide, and have driven east on it about 3 fms.; we are now driving north-north-east on the guide, to cut other lodes which are running across the bay. At Carnellee, we have sunk the winze 11 fms. below the adit, and have now commenced driving on a branch of tin in eastern end. We have raised altogether about seven sacks of tinstuff, worth, say, 15*s.* per sack."

WHEAL CATHERINE MINING COMPANY.—At a meeting of adventurers, held on the 16th inst., the accounts, showing a balance of 153*l.* 9*s.* 8*d.* against the adventurers, having been examined and passed, it was resolved that a call of 4*l.* per share be declared.—The agent's report stated that the lode in the adit level, upon which they have driven upwards of 120 fms., is of a very promising character. At the 12 fm. level they have driven about 70 fms. upon the above lode, and at times have good stones of lead. They have cut the lode at the 22 fm. level, but have not cut into it more than 8 ft.; it is composed of flookan, spar, and stones of lead. In judging from the improved appearance from the adit to the 22 fm. level, there is but little doubt of the lode making lead at this level. Mr. Paddon having last week sent Capt. Evans to inspect the mine for him, reported to the meeting very favourably of it.

TREWAVAS MINING COMPANY.—The next meeting of the proprietors in this mine will be held on Monday next, when the accounts for the past year will be closed, and special matters considered.

GREAT WHEAL WILLIAMS.—A special general meeting of the shareholders is convened for Monday, the 9th March, for the purpose of considering a proposition made by the adventurers of Lamerhoe Wh. Maria Mine, relative to a piece of ground between the two mines, and belonging to Great Wh. Williams.

We have seen, at the office of the company, some stones of excellent copper ore, raised from sinks in different lodes opened upon in Lamerhoe, and they certainly exceeded our expectations at so shallow a depth. That taken from Benny lode is apparently rich; whilst some large stones of grey and black ore, intermixed with sulphuret, are shown from the lode, marked H in their map.

FREE TRADE IN COPPER.—A vigorous effort is now being made in Birmingham to induce Sir Robert Peel to admit copper ore free of duty. By the reduction of the duty on hardware of foreign manufacture, our hardware merchants and manufacturers contend that they ought to have the raw material at the lowest possible rate; and that if iron and tin can be had duty-free at home, so ought iron, tin, copper ore, and other such minerals to be imported duty free from abroad. The great rise which has taken place in the price of coals and iron in the districts of Birmingham and Wolverhampton has necessarily occasioned an advance in the price of the manufactured article. Profits have been limited to the smallest scale of remuneration, and it now appears evident, that unless we are to have copper ore and other minerals imported duty free, our brass founders and brass workers must suffer much ere long.—*Morning Chron.*

[FROM CORRESPONDENTS.]

DEVON AND COURTNEY.—A considerable improvement has been made here during the last few days; the lode in the adit level is found 18 inches big, all saving work. A great advance in the price of shares has been the result, but our present limited information will not permit us to say more, before the same has been authenticated.

NORTH FOWEY CONSOLS.—Improvements are daily manifest in this important sett. In the eastern end the two branches have come together, and the lode found of a very promising nature, and averages about 18 in. in width. Ten barrows of good work was broken (on Saturday last) in the end, which is only 10 fms. from surface. The lode in the western end is from 18 in. to 2 ft. wide, with beautiful stones of ore. This promising adventure stands high in the locality, and shares are changing hands at a great premium; the full amount of the first call, of 10*l.* per share, has been paid into the bankers, and a steam-engine, of efficient power to work her to a considerable depth, is in course of being contracted for.

TAVY CONSOLS.—A considerable improvement has taken place in that part of the sett, called Hocklake; the lode is about 4 ft. wide, and orey throughout, and some good rocks of ore, weighing upwards of 3 cwt. in a stone, have been broken. The lode going west is but a short distance from the boundary in the lands of the Duke of Bedford, who refuses to grant any more ground for mining purposes.

WHEAL ELIZABETH.—This mine, or sett, is situate south west of the Callington Mines, two lodes taking a direction east and west having been discovered, and, to a certain extent, proved, while two others form a junction. The main lode, which has only proved to the depth of 3 fms., gives a strong leader of lead, 10 in. solid ore. In the old mine, the adit level is said to be improved.

WHEAL GRACE (near Tavistock).—The discoveries which have been recently made here, have determined the adventurers on giving her an effectual trial. A steam-engine, of 30-in. cylinder, is to be immediately erected.

WHEAL MARTHA.—From the sink, going under the 10 fm. level, 60 tons of ore have been raised, within the past three weeks or month, of seven to eight produce, by a *pare*, embracing *one man and a boy*. The water in the 20 fm. level prevents active working, until the engine is erected: in the old mine, in driving the 60 fm. level, the ore ground is said to be saving work; and it is expected that the engine will go to work in a month from the present period. The engine in course of erection is on the combined cylinder principle, Mr. W. West being engaged in its erection.

REGISTRATION OF SHARES ON WHICH CALLS ON THE WHOLE HAD BEEN PAID.

SIR,—I should esteem it a favour by your answering the following question in your next Number:—A party purchases 10 shares in a mine, in which the vendor holds 20, and on which he had not paid the last call; on presenting the transfer to the purser, for registering in the cost-book, with the call on the 10 shares, the purser refused to transfer them, unless the call was paid on the 20. Your opinion will be received with much satisfaction.—A.

[We consider the purser was perfectly justified in refusing to register the 10 shares without the call on the whole, as it would be making a bad precedent, and not in accordance with the cost-book system.]

PENTYRE GLAZE MINE.

SIR,—In your paper of the 3d ult., an inquiry was made by a Mr. Cogan respecting this mine, and whether it was working with advantage to the shareholders, &c. Since that date, all the men on the mine have been discharged, but without payment of about four months' wages; and there are various merchants and mechanics' bills to the amount—report says—of about 2000*l.*, due from the adventurers. Proceedings have been taken in the Stannary Court, and an injunction has been granted, to restrain the disposal of the engine and materials. The mine is now left; the managing agent (Mr. Stephens), is not to be found; a principal shareholder is gone to Jersey; and no one in this neighbourhood is willing to acknowledge himself an adventurer. If, therefore, Mr. Editor, by inserting this letter, and bringing the matter under the notice of the London adventurers, some of whom are highly respectable and responsible men, you may be the means of their coming forward at once, and discharging their liabilities; and should they think proper to either dispose of the materials, or work the mine efficiently—and which I consider might be done at a small expense—the sooner it is done the better. AN OBSERVER.

Near Wadebridge, Feb. 24.

UPTON AND ROBERTS'S LAMP.

SIR,—It is only necessary for me to observe, in reference to the remark of your correspondent, who has assumed for himself the *soubriquet*—"Black Diamond"—that I claimed superiority in favour of Upton and Roberts's lamp, *properly constructed*, on the principle assumed, and allowed to be correct—*not* carried "too closely, and admitting a *perfect*—not an imperfect—supply of air," in conformity with that principle of safety: such an one as I obtained direct from Messrs. Upton and Roberts—such an one as withstood triumphantly the severe ordeal before the Commons committee in 1837, and won their recommendation—such an one as merited, and received, the eulogium of the Belgian commission—and such an one as has gained the suffrages of the South Shields committee for the "Prevention of Accidents in Mines."—J. MURRAY, *Portland-place, Hull, Feb.* 21.

SAFETY LAMPS—MENZIE'S SYSTEM.

SIR,—I frankly confess that I have no great predelection for "safety lamps" of any kind, for these plain and substantial reasons:—1. Wherever a safety lamp is required, there is an injurious—if not a deadly—atmosphere. 2. A well ordained system of working coal mines, I feel persuaded, requires no safety lamp whatever. 3. Safety lamps relax our endeavours to obtain the desideratum referred to, as well as that of a sound ventilation. In fact, "safety lamps" are lures to destruction—an *ignis fatuus*,

That leads to bewilder, and dazzles to blind.

Have I not repeatedly recommended a shield of *mica* in your pages? I was the first to do so; Dr. Boswell Reid might surely, then, have assigned the priority, which so clearly appertains to me, to the right source. It is at once flexible and elastic, as well as transparent. With such a concentric shield, the "Davy lamp" would be preserved secure from the contingencies of lateral "blowers" and currents of air. When I took an active part in this question, 1825, *et sequent*, I can remember that the system of working coal mines, propounded by Lieut. Menzies, of Durham, in the *Annals of Philosophy*, for 1816, very forcibly impressed my mind, and I must assume that it has by no means received that attention to which I certainly believe its merits entitle it. It is, in brief, as follows:—The roof and floor of the mine are inclined conformably with the dip of the strata: the working lines are to be *diagonal*—not rectangular—as in the present system of pillar working. These pillars, it is thus clear, would be *rhomboidal* in form, and not parallelograms as now. The downcast shaft to be considerably deeper than the upcast shaft. Suppose, *c*, *a*, 200 yards in the former and 90 yards in the latter; this would certainly provide for the natural exit of the "fire damp," and, as far as I can see, is at once practicable and safe.—J. MURRAY, *Portland-place, Hull, Feb.* 21.

STANNARIES' COURT, CORNWALL.

JURISDICTION OF THE COURT.—In a small debt case (Uren *v.* Michell) a point of considerable importance was involved.—When the action was tried, a verdict was returned for the plaintiff.—Mr. BENNALLACK now moved to set aside that verdict, and enter a nonsuit, on the ground that there was no satisfactory evidence of either of the parties being miners. The only evidence to that effect, was by a clerk in the bank of Messrs. Batten and Company, of Penzance, who proved that money had been paid into that bank, by the purser of Ding Dong Mine, for Mr. Michell, the defendant, as being lord of the soil. Mr. Bennallack said it had not hitherto been ruled by the court, that a lord of the soil was entitled to the privilege of sueing in that court, and upon this ground he applied for the rule.—The VICE-WARDEN said, that as it was a question of some importance, and had never before been decided, he should take time for considering it. The rule *nisi* was then granted, in respect to the point of law merely; Mr. Bennallack, at the same time, intimating that he was not prepared to proceed further till the next sitting of the court.

VALIDITY OF SHARE TRANSFERS.—In the case, Michell *v.* Chipman, it appeared that an action had been brought to recover the balance due on a share in East Wheal Seton, and a verdict was returned for the plaintiff for the amount. On the part of the defendant, Mr. STOKES now moved to set aside that verdict, and enter a nonsuit, on the ground that evidence had been given on the trial which was inadmissable. The only testimony was that of the plaintiff's father, who proved the transfer of the share to the defendant, on the surrender by the latter of an old share, upon which transaction the balance due to the plaintiff for the other share was 3*l.* Mr. Stokes said he asked the plaintiff's father, when giving his evidence, whether there was any memorandum in writing of the transfer, to which he replied that there was, and he gave the substance of it. Mr. STOKES thereupon contended that the transfer ought to have been stamped, as it was for a valuable consideration; and that unless it was stamped, it could not be received in evidence, much less could a person give evidence of its contents.—The VICE-WARDEN said, the form of a transfer was nothing more than a letter to the purser to enter the sale in his book. In his opinion such a document did not require a stamp, but as the question involved was one of great importance in the county, in order that it might be fully considered he should grant the rule *nisi*. The practice, however, of making a share a negotiable security, when the person holding it had only to give notice of entry to the purser, he thought might have a most mischievous effect, and he was ready to do any thing he could to remedy the matter. It was, in fact, an attempt to bring back the mischief of the old scrip system.—The rule *nisi* was then granted.

WHEAL TREVAUNANCE.—The hearing of this case (the particulars of which we have already given) occupied the court nearly 10 hours—23 witnesses being examined, and many more were in attendance. The jury consulted nearly three-quarters of an hour, and returned, as on the former trial, a verdict for plaintiff's for 215*l.* 17*s.* 4*d.*

SALE OF SHARES FOR ARREARS OF COSTS.—The purser of Wheal Comfort sued an adventurer for arrear of costs. Under an order of the court, the defendant's shares had been sold, and produced 44*l.* 5*s.*: the decree was for 24*l.*; the taxed costs amounted to 20*l.* 19*s.*, and 23*l.* 0*s.* 6*d.* had been paid to plaintiffs. On the motion of Mr. SIMMONS, the registrar's report was confirmed.

In two cases, Mr. CHILCOTT moved for a rule *nisi* for the sale of shares in Wheal Gill, at Liskeard, on the suit of the purser, the defendant's costs being in arrear. There had been no answer filed to the decree *pro confesso*, and a decree for payment within 16 days had been issued, service of which Mr. Chilcott proved by affidavit.—Rules *nisi* granted, to show cause before his Honour in London, on the 3rd of March.

WITTON PARK IRON-WORKS.—Messrs. Bolckow and Vaughan, the large iron founders at Middlesbro', have tapped two of their new furnaces at Witton Park. For those unacquainted with the locality, we may state, that the Bishop Auckland and Weardale Railway (a continuation of the Stockton and Darlington) about three miles west of Bishop Auckland, skirts the banks of the Wear, at an elevation of about 56 feet above the river; at the point selected for the iron works, there is a large area of level ground, at the foot of the sloping bank, and the raw material is passed from the railway at this elevation, so as to admit of a continuous descent from the first process until it arrives at the foot of the hill, where it is discharged from the furnaces in a state of manufacture ready for market. The proprietors generously determined to give all their workpeople a treat, and for this purpose arrangements were made to bring up by special train 600 from Middlesbro'. They were accompanied by two bands of music with many appropriate banners, and after halting at Darlington, to take up some of the railway directors and others who had been invited, proceeded to the works, where the scene was of a most animating description—every point whence a view could be obtained being studded with spectators. At the time appointed for tapping the furnaces, the drum beat, and Miss Vaughan proceeded to assist in the ceremony: the liquid iron flowed forth in a beautiful stream, causing a heat that induced the crowding spectators to enlarge the circle, and in a short space of time a fine "litter of pigs" was presented to view; this was from the hot blast furnace. The cold blast furnace was then tapped with the same result, and both these events were greeted by the hearty cheers of the crowds. Another furnace will be in blast in a few days, and a fourth within a month. At a later period of the day, some of the pigs having been broken, the iron was stated to be of a most encouraging sample. A large brickshed was comfortably fitted up for the workman's dining-room, where they were supplied with noble portions of beef, bread, and ale. The ladies and gentlemen (upwards of 60), invited to meet Messrs. Bolckow and Vaughan, were entertained in a large temporary erection, ornamented with evergreens, where an excell ent collation and the best wines were abundantly provided for the numerous guests.—G. H. WILKINSON, Esq., of Harperley, presided—having Mr. Vaughan on his right, and Mr. Pease on his left.—Mr. Bolckow was the vice-chairman.—At the conclusion of the repast, the CHAIRMAN in proposing health and prosperity to Messrs. Bolckow and Vaughan, remarked that it had long been known that the Valley of the Wear was stored with exhaustless treasures of minerals; that iron ore, limestone, (containing 96 per cent. of pure carbonate of lime), coal of the finest quality and well adapted for coke, were in juxta-position; and that nature had superadded to that favoured locality fire-stone and fire-clay, for the building of furnaces, &c. Long had it been known that these treasures existed, and now, after a siege longer than that of Troy, with the efficient aid of the gentleman on his left and his family, they had the proud satisfaction of seeing a commencement at least of the development of these treasures. He felt sure, if spirit and talent could give success, that Messrs. Bolckow and Vaughan, with their extensive works at Middlesborough, the making of iron in their own hands at Witton Park, and the making of their own coke at Woodfield, were the men who had every prospect of as abundant a measure, as their best friends could desire.—Mr. BOLCKOW expressed his pleasure at seeing the friends of himself and partner present on that occasion: they had at times, he said, felt anxiety and labour to press upon them in bringing those works to their present state, but the result of that day's proceedings had fully compensated them.—Mr. VAUGHAN, being called upon, entered into an interesting detail of the number of persons the works would be likely to employ, which, in obtaining the ore, limestone, and coal, and at the works, he estimated would be from 1500 to 1800; and so satisfied was he of the increasing traffic that such works must cause, that he would gladly undertake the repair of the locomotive power, if the railway company would allow their materials to pass along the line free of dues: he also stated that, although much appeared to have been done in building furnaces, and erecting engine power equal to 150 horses, yet those works were not so much as contemplated 12 months ago; he, however, felt gratified at the success so far obtained, which he considered augured well for those returns which so large an outlay demanded. This valley had often been spoken of for its beauties; but when he saw the smoke emanating from those tall chimneys, he could not but exclaim that those beauties were much enhanced; the quantity of ironstone required per annum for carrying on their operations would not be less than 62,400 tons, coal and coke 104,000 tons, and limestone 20,800 tons, the greatest portion of which they anticipated bringing along the Wear Valley Railway.—Mr. VAUGHAN proposed the health of Mr. Henry Pease.—Mr. PEASE briefly replied, stating that he had no claim to so kind a reception, and the Chairman, as his profession enabled him, had so ably summed up the matter, that there was little to add; he, however, could not withhold the expression of his satisfaction in witnessing the operations of that day, not only because the expectations of those who so kindly entertained them on the occasion had been so fully realised, but from the consideration that this event would contribute to the happiness of the community at large; and that this was the fact, would be obvious when they considered that the works, which they had so recently seen brought into existence, would give employment to the industrious classes to the extent of nearly 2000 persons; and those, after the toils of the week, would receive wages to which they were justly entitled—and he hoped such as would establish and maintain comfort in their families. And though the place upon which they were then met had heretofore been known by the name of "Paradise," he trusted it would be productive of more happiness than it had ever been before. As one effect of new works, passenger trains were now running three times a day up to Crook, and conveying upwards of 600 passengers per week, where it was thought an act of insanity to make a railway; and there could be little doubt, that in the course of the approaching summer, when the Witton Park and Tow Law Iron Works were brought into full operation, the passenger and other traffic would be very considerably increased. He trusted that the spirited proprietors of those undertakings, whilst they induced a wholesome competition between Wales and Scotland, would at the same time have an ample return for the large capital embarked, and that a never falling "litter of pigs" might be found to "cut up thick."

MINE ACCIDENTS.

East Wheal Crofty.—J. Granvill was seriously injured by a fall.

Tresavean.—Two miners (Spargo and Johns) were dreadfully injured by the premature blasting of a hole they were employed tamping.

Trevishey.—A miner (Peters), and a boy, were injured by a premature blast.

Staveley.—E. Mourn was killed while employed in a colliery at Stavely Forge.

Dowlais.—D. Jones was killed by a fall of stone in the Ffos-y-fran Colliery.

Fissall Green, Rowley Regis.—J. Mullet was killed by a fall of coal.

Dudley.—W. Cole met with a serious accident from premature explosion, while blasting in one of Lord Ward's limestone pits.

Walsall.—S. Farran was drowned in a colliery in the Birch Fields, Bloxwich.

Willenhall.—R. Davis fell down Messrs. Sparrow's Colliery, and was killed.

Broughton.—G. Richardson was killed in one of Earl Burlington's Quarries.

Coseley, Wolverhampton.—E. Clarkson was killed at the Walbrook Works.

Sedgley.—T. Christian was killed at the Spring Vale Iron-Works.

Green-lane Colliery, St. Helen's.—J. Littler was killed by an explosion.

Broad-lane Colliery, Oldham.—P. Roberts was thrown out of the "hoppit," and killed.

Glasgow.—P. King was killed in Mr. Dixon's Mud Dobs Colliery.

Whiteletts.—The miners had been employed during the night pumping the water from the pit, and were relieved in the morning—preparatory to beginning; the day men were renewing the candle in the safety lamp, when the flame ignited the fire damp, causing an explosion, by which M'Gee and Harper were killed,—M'Gee's father died shortly after of his injuries, and a fourth, Caddows, escaped with some severe cuts and bruises.

THE TIN BOUNDS.—We omitted, in our last, to state that, in the case, Rogers *v.* Brenton, the rule for a new trial having been made absolute by Lord Denman, Mr. Butt reminded the court that the argument upon the legal validity of the custom in question had not been presented to the court, when his lordship intimated that the court would hear counsel upon that subject upon a subsequent occasion.

The adventurers in the South Harvennah Mine, Alternun, Cornwall, held a meeting at the Royal Hotel, Plymouth, on Thursday. A highly satisfactory report of the condition and prospects of the mine was read, and it was determined to follow up the undertaking with renewed energies.—*Plymouth Jour.*

A deputation from the iron trade of South Staffordshire, consisting of Mr. John Barker, Mr. William Ward, Mr. William Matthews, and Mr. W. O. Foster, had an interview with the Earl of Dalhousie on Friday, at the office of the Board of Trade. The deputation were introduced by Col. Anson, M.P., C. P. Villiers, Esq., M.P., and Thomas Thornely, Esq., M.P.

NOVEL MODE OF PROPELLING VESSELS.—On Wednesday we had an opportunity of inspecting at Mr. Keilar's timber-yard, Hurst-street, a new engine on the atmospheric principle, invented by Mr. Alexander Weston, of Falkirk. The action appears to be simple. Two cylinders, fitted with descending valves which charge them, are placed in the forepart of the vessel, having a communication with longitudinal pipes fixed outside, running parallel with the keel, the water being allowed to flow into the pipes; the engine being set in motion by manual labour or steam power, a quantity of air is driven into the pipes, which air, coming in contact with the water, causes a struggle to take place alternately between the two elements, and thus the propelling power is produced. The principle is said to be applicable to the smallest pleasure yacht or the largest merchant ship; but where great power is required, a steam-engine would be necessary. Mr. Weston, the ingenious projector of this new motive power, is the inventor of the air churn.—*Liverpool Mercury.*

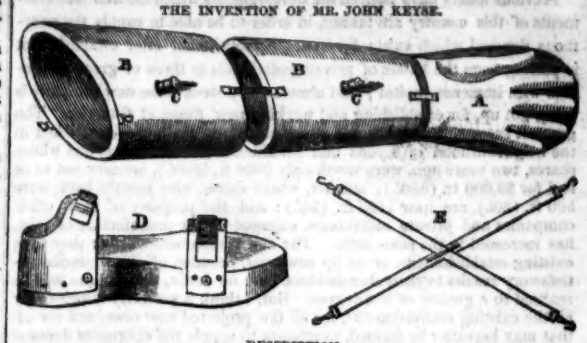
RAILWAY LITIGATION.—We are given to understand that the actions of Messrs. Lewis and Lowe against the Leicester and Tamworth Junction Railway Company, and the Oxford, Witney, Cheltenham, and Gloucester Independent Railway Company, for advertising, the last of which stood for trial on the 19th instant, have been stopped, by those companies paying in full. This is as it ought to be.—*Sun.*

A GUARANTEED CURE FOR ASTHMA, OLD COUGHS, AFFECTIONS OF THE CHEST, &c., BY HOLLOWAY'S PILLS.—Recently some extraordinary experiments have been made upon various patients suffering for long periods under most distressing asthmatic complaints, while others were affected with indigestion, acidity, sickness, soreness, and a sinking at the stomach, producing symptoms that frequently terminate in dropsy and other dangerous diseases. To the number of a dozen patients were chosen, being considered more or less incurable—they were put under a course of Holloway's celebrated pills, which completely succeeded in the cure of them within 75 days from the commencement, and some even in less than half that time.—Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.

ROYAL LIFE-PRESERVING AND SWIMMING APPARATUS

[*Registered pursuant to Act, 6 and 7 Vic., cap. 65, and by Royal Letters Patent.*]

THE INVENTION OF MR. JOHN KEYSE.



DESCRIPTION.

A.—Gloves, with the hands webbed and extended; thereby producing considerable power and buoyancy, exceeding vastly the propelling power of each natural hand in the ordinary method of swimming, giving entire freedom to the fingers, dispensing with the contraction of the hand, and relieving the individual from the effects of cramp, which is often produced through such causes.

B.—Air-tight conical armlets, connected to the gloves, and which are detached into three parts, very simply connected; thereby leaving the elbows and wrist joints to entire freedom of action when applied to use, by being drawn on to the arms and hands. The armlets are drawn up to the points of the shoulders and elbows, confining the power of buoyancy when inflated on the leverage of the joints; thereby raising the individual over the surface of the waves of the sea, and keeping the head high and the mouth free from the water. This inflation can be increased for providing additional buoyancy when required, for protecting persons from drowning.

C.—Self-acting valves, for inflating the armlets. The ends to be placed between the lips, the nipple against the teeth, and forced back, opening the valve and blowing the air in at the same time. The nipple to be pressed down, when required to discharge the inflation, in cases of drowning to preserve or secure the body. On rising to the surface, a new inflation will enable the diver to support the body, and the power of the apparatus to bring it ashore; thereby dispensing with the difficulties attending life-boats.

D.—Cork clogs, secured by elastic straps and buckles; concave at bottom, possessing the powerful advantages of propulsion, and giving to the wearer the apparent effect of pressing himself forward, as if forcing or projecting himself from some fixed substance. It, likewise, possesses the advantage of making considerable progress in treading water; thereby occasionally relieving the arms from the effects of long exertion. They are also of vast benefit in cases where persons are a length of time immersed in water by preserving the legs from depressing. The incalculably valuable part of this portion of the apparatus is clearly demonstrated—for instance, from the pressing down of a reversed vessel—such as a glass—immersed in water.

E.—Cross straps, passing over the back and shoulders, and fastened to the two rings of the upper armlets, for preserving the position when the inflation is sufficiently discharged, and permitting the diver or wearer to dive with facility.

Note.—The admirable principle and effects of this apparatus, are exemplified by the swimming powers of the frog, swan, duck, &c.—the body being entirely free, and possessing all its momentum or power, by the action of the extremities.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—In relation to the above invention, I beg to say that it has been *tested in the River Thames*, private baths, and, more particularly (as that is a greater proof of its practicability and efficiency in cases of danger), in the *open sea*—in all of which cases I am happy to say the experiments were crowned with the most complete and admirable success. It will be found on inspection and trial to possess power and qualities which no other apparatus for the purpose at present does, by *giving buoyancy and momentum to the extremities, and so preserving the central weight of gravity*, thus enabling persons to swim against tides and cross-currents, neither can any one be drowned whilst wearing the apparatus; it also dispenses with the necessity of teaching the art of swimming, by giving to the wearer the confidence and power to swim, and to save himself and others in case of danger. Its value to bathers, by dispensing with the life-boat, is incalculable; and in cases of wreck on sea-shores, its operation would be found most successful for the preservation of human life; and, in this instance, I may allude to the late melancholy occurrence of the loss of the *Caraveni*, emigrant ship, off King's Island, Bass's Straits, when upwards of 400 persons perished, merely for the want of some efficient means on board or on on shore, of conveying a rope to the sufferers. This is *one* only of the numerous instances that have lately occurred where life might have been saved by my apparatus. In cases also of persons falling overboard from any of her Majesty's vessels of war, or of merchants' ships, it would be found to answer perfectly, and where the life-buoy has often proved a failure. Looking at the valuable qualities possessed by the above simple contrivance, with no difficulty in applying or wearing it, capable of being put on or taken off in one minute, I hope, by the means of your scientific and talented Journal, to draw the attention of all persons of humanity and Christian feelings to the necessity of *giving public countenance and support to my invention*; but bearing in mind the inefficiency of all the present means adopted for saving life (*in comparison with this apparatus*), and also the daily and awful cases of loss of life from shipwreck and other causes, at which the heart recoils to mention, I myself have no fear of the public patronage in support of the cause of suffering humanity.

London, Feb. 26. I am, Sir, your's, &c., JOHN KEYSE.

ZINC COATING.—At a recent meeting of the Royal Institution, Prof. Brande read a paper "On the Electro-Chemical Protection of Metals," the chief subject of which was, the description and philosophical explanation of the protection given to iron by coating it with zinc. The researches of Sir H. Davy in the years 1824-25 were noticed, and the effects of sea-water on copper, simply immersed in that liquid, were contrasted with the protection afforded to it by a cemented plate of zinc or iron. It was then demonstrated that, whenever two metals, possessing unequal affinity for oxygen, are brought into metallic contact in any medium containing oxygen, an electrical current is produced; that this current passes from the more oxidisable to the less oxidisable metal; and that the latter is protected by the increased corrosion of the former. Thus, the interior of a copper stew-pan will not be affected by acids so long as any of its tinning remains; while, on the contrary, if what is called tin-plate (*i. e.*, iron-plate coated with tin) be scratched, however slightly, the iron is quickly corroded, the cuticle of tin being protected at the expense of the metal which it was designed to preserve. Now, *zinc* on *iron* is what *tin* is on *copper*—a perfect protection, so long as any remains on its surface. It was then shown that, generally, the direction of an electric current depended, not only on the metals, but on the nature of the medium through which the current passed, (*e. g.*, whether an acid, or a solution of sulphur, or of any other electro-negative substance, was used). Instances of metallic deposition by chemical affinity, as that of lead on zinc, of copper on iron, &c., were exhibited; and it was shown that, whenever the electric current was superinduced by the employment of a conductor of electricity, whether metallic or not, the metal passed to the conducting (or the electro-negative) surface (the cathode of Faraday). The process of zincing iron was then exhibited. The metal is carefully scoured, steeped in dilute acid, washed in water and thoroughly dried, and then plunged into melted zinc. As it is necessary that there should be perfect metallic contact between the metals, sal-ammoniac is sprinkled over the melted zinc before the immersion of the iron. This covers the liquid metal with a film of chloride of zinc, which precludes intervening oxide, and thus insures perfect adhesion between the coating and coated metals. Professor Brande concluded his communication by exhibiting zinced iron piping, and by mentioning instances of the successful application of this invention, as in the cases of the iron roofing of the Houses of Parliament, the buoys used by the Trinity House, wires of galvanic telegraphs, &c., &c.

RUST, A PRESERVER OF METAL.—All the common metals, except tin, rust; they become duller and duller up to a certain degree, lose gradually their lustre, and then the process goes no further. Instead of this rusting being a destroyer of the metal, it is a preserver; for, even in the case of iron, which rusts quickly as compared with other metals, if it be dipped into tin, it comes out coated with it, and it is preserved beautifully. If iron be exposed for a couple of hours to the action of water, the iron becomes quite corroded; but when tinned, the iron is protected, and the tin itself appears unaffected. How is it that this metal can protect itself, and the iron that is under it? It is simply owing to the substance formed on the surface by the attraction of oxygen, which is so adherent to the metal beneath. It gives a protection which no varnish, or any other kind of application can afford. Take a copper or a tin plate, they are both protected in their metallic state by a thin coat, formed in the first instance of oxide. It is only because this coat is so exceedingly compact, close, and adherent, that it passes for nothing—a mere film of tarnish. You think you see, or touch, a piece of tin; you cannot detect the film, except by close examination. We know it is there, but it is only by optical phenomena that we can measure its thickness. It seems clean and beautiful; but if you rub it off, you give the metal beneath a new character; the beautiful lustre, however, passes off the first moment up to a certain point. The body formed by the combination of oxygen with iron is different. The oxide does not adhere to the metal beneath; it forms upon it little spots, or porous tumuli. It is not an investing varnish, but the process goes on through the pores of the rust, especially if the metal be placed in a damp atmosphere. This is the reason why we find a difference between copper, iron, tin, and lead, when used for roofs, or other external purposes. The iron alone is eaten into, and destroyed by, this want of adhesion in its rust to the surface of the metal. "It is curious to observe, in some cases, how tin, a metal having a slight attraction for oxygen, protects other metals from oxidation. In Canada, tin plate is used for the roofs of houses; I am told that you are dazzled by the lustre of the setting sun upon the roofs; and there, although it is exposed to the atmosphere year after year, it does not decay, because the superficial coat of oxide protects the tin and iron beneath."—*Faraday.*

GIANT TRILOBITE, SUPPOSED TO BE THE LARGEST YET FOUND.—In the possession of the Llandilo Mechanics' Institute is a fossil of the above crustaceous marine animal, measuring, longitudinally, 10½ in., and 6¼ across the lobes. It was found in a stratum of the lower Silurian rocks—the Caradoc and Landilo formation. It belongs to the class "*Asophus Tyrannus*," so denominated by Mr. Murchison, in his valuable work on the Silurian System. The slate is so full of fragments of this animal, that millions must have swarmed on the spot.—*Cambrian.*

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

Previous letters have noticed the developments which the iron establishments of this country are taking, in order to be able to supply the enormous demand which exists for iron. Establishment after establishment is passing from the hands of private individuals to those of great companies with immense capital; and almost every week some new company is being got up, for establishing and working new *forges et fonderies*. The greatest success, it appears, has attended companies lately established in the neighbourhood of Lyons and St. Etienne; for instance, one whose shares, two years ago, were worth only 5000 fr. (200*l.*), are now not to be had for 22,000 fr. (880*l.*); another, whose shares, nine months back, were 500 fr. (20*l.*), are now 1400 fr. (56*l.*); and the property of most other companies and private individuals, engaged in the manufacture of iron, has increased in the same ratio. The new companies, whether they take existing establishments, or set up new ones, promise, of course, similar satisfactory results to their shareholders, and, no doubt, the promise will be realised to a greater or less degree. But, I think it perfectly hopeless, for all the existing establishments, for all the projected new ones, and for all that may hereafter be formed, to attempt to supply the enormous demand for iron that now exists, and that will hereafter arise, for railways alone. France, no doubt, possesses great mineral wealth, that has not yet been brought to light; but it is not likely, perhaps, that it can exceed her present production. Now that production is unequal to her annual wants, saying nothing of railways. Is it possible, then, after making every allowance for an increased supply, that she can yield anything approaching the enormous quantity which is demanded for railways actually in course of construction, and which will be demanded by those about to be formed? The railways, it appears, now making, have swept her establishments of all the iron that she had in reserve—a million tons, or thereabouts; but some of them are, at this moment, at a stand still for want of rails. The section of the Northern Railway, from Clermont to Amiens, cannot, for example, be completed for some months later than was expected, because the ironmasters have not been able to act up to their contracts for the supply of rails; the Orleans and Tours section of the Bordeaux Railway, could not be opened on the 1st November last, and cannot be opened for a month or two yet to come, entirely from the same reason. At this moment there there are upwards of 2000 kil. of railways in construction, and to supply them will require the utmost energies of the ironmasters for the next four or five years, even supposing the supply to be possible. This year 3000 or 4000 additional kil. of railways will be authorised, and will have to be supplied with millions of tons of iron in the course of the next four or five years. I ask, again, is this possible? The ironmasters insist that it is, because in 14 or 15 years, the supply of iron has doubled; but they overlook the fact, that it is not a doubling or trebling of the annual supply which would enable the demand for the railways to be met. Neither 40 nor 50 times as much as the present supply of France would be sufficient for that purpose; and the question is, can France yield 40 or 50 times more in the course of the next five years, than she now does?

The partisans of free commerce are getting up associations for the promulgation of their principles, and the adoption of measures to force them on the Legislature. Bordeaux has already got up its "League;" Paris has its; and other great towns will, perhaps, have theirs. But this sort of association have little or no liberty of action in this country. The right of influencing the people, by means of the press, is about the only means of acting they have, and even that must be employed sparingly and with prudence. No such attacks as the Anti-Corn-Law League made on the landlords would be tolerated for one instant—no power of assembling large masses of people, to hear declamatory speeches, is permitted—nothing like public discussion is allowed, and the privilege of petitioning itself is very restricted. Hence, it must not be expected that the Free Trade Associations of Bordeaux, Paris, or other places, will make any great noise, or exercise any great influence. But still they are useful, if only as a sign of the times. At least, they will do something; and that something, however little it may be, must not be despised. It will be a blow to monopoly—not fatal, indeed, but not without value. It is high time that monopoly was brought down in France. Here, it is the agriculturists that complain of it—the manufacturers that protect it. To the former it is a perfect curse, causing continual ruin; and to the latter it may be doubted whether it is of any real good. I hope the abolition of it will take place (though, perhaps, it is not to be expected at present), for it would be a great thing for our country, and especially for the mining interest.

I am inclined to think, that the French Government would not be indisposed to purchase some considerable quantities of coal on reasonable terms. The cause of this opinion is, that one of the superior *employées* of Ministry of Marine stated yesterday to a friend of mine, that he would be most happy to take, on behalf of the Government, any quantity of coal, delivered at a cheap rate at Toulon. My friend is not an Englishman, and the coal that he had to sell is in Styria. I should apprehend, that English coal would be cheaper than Styrian, and, if so, perhaps the French Government would give it the preference. But, I only mention this little matter as a hint to such of your readers as it may concern.

A mine of rock salt, of great value, has been, it is said, discovered in Algiers. According to the St. Dixier newspapers, engagements have been entered into by the Haute Marne for the sale of 300,000 kil., 500,000 kil., and 300,000 kil. of cast-iron, at 210 fr. the 100 kil., to be delivered at Dijon, from 15th June, 1846, to 15th June, 1847. In the valley of the Marne engagements have been taken for 400,000 kil., to be delivered at St. Dizier, at 195 fr.; 400,000 kil., to be taken at the furnaces, at 195 fr.; 500,000 kil., at the furnaces, at 200 fr.—to be delivered within the next four or five months. What are called *fers battus* are so little demanded, that many of the furnaces, at which they are manufactured, are shut up. Dearness of coal is one great cause of this. Some furnaces have tried if vegetable coal and coke would do united, but the mixture does not answer at all. The iron produced by it is of bad quality, and very difficult to be worked. Zinc is every day coming more and more into use, especially for roofing. Iron is also becoming daily more extensively employed for beams, rafters, columns, &c., used in the construction of houses.—*Paris, Feb.* 24.

ABOLITION OF THE MONOPOLY ON IRON IN MOROCCO.—We stated, in a former Number, that the Emperor of Morocco had imposed such heavy duties on the importation of iron from Europe, as to render it a prohibitory article of commerce. We are glad to find that the Minister of Commerce and Agriculture at Paris has announced that he has received a letter from Tangiers, under date of the 28th December, announcing that the Emperor has abolished the monopoly of the iron trade, which had always been a most important branch of commerce, but which had become completely null since it had been declared an imperial monopoly. England formerly exported annually to a very large amount of iron and steel to the different parts of Morocco, either direct, or *via* Gibraltar. This important branch of industry is now likely to be again revived.

DIRECT LONDON AND EXETER RAILWAY.—It has rarely been our lot to witness a more noisy and unsatisfactory meeting, than the one which is reported in our columns of to-day, as having taken place at the London Tavern, on Monday last. The age of iron has furnished a new species of public meetings, and epithets, which were considered libellous and dangerous but a few years ago, are now bandied about, between director and dupe—solicitor and scripholder—as the ordinary language of the day. We can scarcely wonder at the ebullition of strong feeling, when we read the doings which we have to record weekly. In the railway, now under notice, it appears that, at the meeting of the 15th December last, the shareholders were under an impression, that there was only a balance in hand of 425*l.*; but, in consequence of the meeting of the 9th February, when some important disclosures were made, and this brought about the present meeting, on the 23d of this month, and the shareholders have the satisfaction of knowing, that there is really a balance of something like 8000*l.* At last Monday's meeting, when Mr. Vallance proposed to wind up the affairs of the company, the whole body of the meeting appeared with him—but the most unbusiness-like and noisy charges and recriminations, quite foreign to the questions under discussion, which Dr. Blundell, Sir H. Pynn, and other parties, indulged in, led the meeting away from the main questions; and, we doubt much, if the shareholders understood for which question they were voting. We are bound, however, to adopt the decision of the chairman, although we most unhesitatingly express our opinion of the propriety of such a course being adopted, as the one alleged to be resolved upon. We propose next week to take a general review of the affairs of this company, from April last until the present time, in order that the shareholders may clearly understand the position, and enable them, fairly and impartially, to discuss the matter, and determine the course to be adopted, as, it is clear, some alterations must be made.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Twelve o'clock.

Bank Stock, 7 per Cent., 208½ 9	Dutch, 2½ per Cent., 59½ 60
3 per Cent. Reduced Ann., 96¼ ⅞	Brazilian, 5 per Cents., New, 83⅝
3 per Cent. Consols Ann., 96⅛ ¼	Cuba Bonds, 6 per Cent., —
3½ per Cent. Ann., 98⅝ ⅝	Chilian, 6 per Cents., —
Long Annuities, 10 11-16	Colombian, 6 per Cents., 51½ 3
India Stock, 10½ per Cent., 259½ 9	Mexican, 5 per Cents., 31½
3 per Cent. Consols for Acc., 96 5⅛ 6	Spanish, 5 per Cents., 27 6⅛
Exchequer Bills, 1000*l.*, 35 7 pm.	Portuguese, 4 per Cents., 58 ⅝
Belgian Bonds, 4½ per Cents., 97⅛ 6	Russian, 5 per Cents., 112½ 12

MINES.—Notwithstanding the excitement which has been very naturally raised in the share market, by the proceedings on railway business before the Committees on Standing Orders, during the past week attention has not been quite diverted from the advantages of legitimate mining, a fair business having been transacted in English mines, many of which have shown decided improvement, and realised a corresponding increase in price. On reference to our share list, it will be found that Bedford, Caradon Wheal Hooper, Devon and Courtney Consols, Herodsfoot, Holmbush, Lamerhooe Wheal Maria, North Wheal Rose, South Wheal Maria, Tamar Consols, Tincroft, West Wh. Maria, and Wheals Blencowe, Catherine, Mary Ann, and Walter, all bear higher quotations than in our last Number. Dispatches will be found in another column from St. John del Rey, Imperial Brazilian, and the Alten foreign mines.

The railway business of the House of Commons, as well as in the City, is progressing most satisfactorily, considering the mass of matter before the committees, although many cases are still pending where non-compliance is alleged. The protracted debate in the House, now for nearly three weeks, has caused a perfect stagnation, not only on the money market, but in the railway share market—as all are anxiously looking forward to the result. The settlement of the account in railway shares, on Thursday, was most satisfactory, notwithstanding the high interest that many of the brokers or jobbers have to pay for their loans, either at the Bank of England, or other discounters; but no defaulter has been declared. Notwithstanding this Parliamentary crisis, well established lines are generally improving, and the premium is from one to five on the shares. In foreign railways, very little has been doing, but what transactions have taken place have been at a premium. There is no doubt that the railway business of the House of Commons committees will proceed rapidly, when the debate on the tariff is terminated, and the new lines will be at a premium, as many of them will be most beneficial to the country, affording (as they will) the means of rapid and economical transit to the public.

RAILWAY MEETINGS.—This week has been more than usually prolific in railway meetings. On Tuesday, the half-yearly meeting of the Caledonian was held at Edinburgh, when the statement of accounts showed a balance of 207,641*l.*, and the report represented the works as progressing in the most satisfactory manner.—The Bristol and Gloucester Company pays a dividend at the rate of 6 per cent., under agreement with the Midland Company. A resolution to this effect was passed, and interest at the rate of 4½ per cent. per annum is to be deducted on such part of the stock as has not at present been paid up.—The dividend declared at the Newcastle and North Shields Company was at the rate of 5 per cent. for the year.—The works on the Tyne Extension line, are progressing rapidly, and it is believed will be complete for traffic in the course of the year.—The works on the Cockermouth and Workington Railway are contracted for, but have not yet been actively proceeded with, in consequence of the company not being in possession of the whole of the land. An extension to Keswick has been taken up by this company, to join the other lines in the Lake district.—The first half-yearly meeting of the Middlesborough and Redcar Company, was held at Darlington, last week—a single line, with sidings, is to be laid in the first instance; and the meeting resolved, that additional shares for 12,000*l.* should be issued.—A meeting of the Ayr and Dumfries Junction was held at Glasgow, on Monday, in consequence of the Caledonian Extension having declined the proposed amalgamation—they, however, offered 1500*l.* towards their expenses, which would not be more than 2560*l.*: it was decided to accept that sum, which would enable the directors to return 2*l.* 5*s.* per share at present, and a trifle more when the affairs are wound up.—The first half-yearly meeting of the Wilts, Somerset, and Weymouth Company, was held on Tuesday last; the receipts from deposits was 75,066; Parliamentary expenses, 15,472*l.* 8*s.*; subsequently 5232*l.* 8*s.*; balance 54,362*l.* 2*s.*—On Thursday, the half-yearly meeting of the North Wales Company was held at the London Tavern. There is an available balance of 32,824*l.* 12*s.* 1*d.* The portion of the line between Bangor and Carnarvon will be opened in July next.—The fourth half yearly general meeting of the North Wales Mineral Company, was held on Thursday, at Chester. The report stated that the bill for amalgamating this company with the Shrewsbury, Oswestry, and Chester Junction, was now before Parliament.—The half-yearly meeting of the Londonderry and Coleraine was held at their office, Church-passage, Guildhall, on Thursday. The report was most satisfactory, and the works are progressing rapidly, giving employment to upwards of 1000 workmen.—The half-yearly meeting of the Lynn and Ely was held at the London Tavern, when the receipts showed an amount of 58,621*l.*, and there was a balance of 15,000*l.*—Meetings also of the Ely and Huntingdon, and Lynn and Dereham Companies were held, and as they are all three now in union, similar resolutions were passed—viz., electing auditors, and fixing salaries.

RAILWAY TRAFFIC.—By the official returns, the amount of traffic for the last week on nearly 1800 miles of railway amounted to 116,460*l.*—viz., for the conveyance of passengers only, 56,544*l.*; and 29,937*l.* for the carriage of goods; with a remainder of 29,979*l.* for passengers and goods—being an increase over the corresponding week of last year of 23,302*l.*

MESSRS. LAMOND'S SALES—TUESDAY.—Direct Northern (2*l.* 10*s.* pd.), 2*l.* 13*s.* 6*d.*; Great Western of Bengal (5*s.*), 14*s.*; East Lincolnshire (1*l.* 5*s.*), 2*l.* 8*s.*; Jamaica Junction (1*l.*), 3*l.*; Newry, Warren-Point, & Rosstrevor (2*l.*), 3*l.* 6*s.*; Scottish Central (7*l.* 10*s.*), 15*l.*; Constituted Northern of France (5*l.*), 15*l.* 9*s.*; Direct London and Portsmouth Atmospheric (3*l.* 15*s.*), 4*l.* 2*s.*; North Staffordshire, Churnet, & Potteries (2*l.* 2*s.*), 5*l.* 17*s.*; London & Blackwall (2*l.* 10*s.*), 4*l.* 4*s.*; North British—Carlisle Extension (1*l.* 5*s.*), 2*l.* 10*s.*; Goole and Doncaster (2*l.* 2*s.*), 3*l.* 6*s.*; Irish Great Western (4*l.*), 4*l.* 1*s.* 6*d.*; Shrewsbury and Birmingham (2*l.* 10*s.*), 3*l.*; South Midland (2*l.* 2*s.*), 4*l.* 5*s.* 6*d.*

MINES.—Real del Monte, 3*l.* 10*s.*; Asturian (6*l.* pd.), 3*l.*

FRIDAY.—South Midland (2*l.* 2*s.* pd.), 4*l.* 2*s.* 6*d.*; South Staffordshire, (2*l.* 10*s.*), 2*l.* 15*s.* North Staffordshire, Churnet, and Potteries (2*l.* 2*s.*), 5*l.* 17*s.*; Direct Northern (2*l.* 10*s.*), 2*l.* 5*s.*; London and Blackwall—new (2*l.* 10*s.*), 4*l.* 2*s.*; Jamaica Junction (1*l.*), 3*l.*; Jamaica South Midland (1*l.*), 3*l.*; Eastern Counties—York Extension (10*s.*), 1*l.* 10*s.* 6*d.*; Scottish Central (7*l.* 10*s.*), 14*l.*; Scottish Central—new (2*l.* 10*s.*), 8*l.* 10*s.*; North Kent (2*l.* 10*s.*), 2*l.* 14*s.*; Direct London and Portsmouth Atmospheric (3*l.* 15*s.*), 3*l.* 16*s.*; Tean and Dove Valley (1*l.* 7*s.* 6*d.*), 17*s.* 6*d.*; London, Hounslow, and Western (2*l.*), 1*l.*; Paris and Orleans (20*s.*), 51*s.*; Great Indian Peninsular (5*s.*), 9*s.* 6*d.*; Madras, Nellore, and Arcott (2*s.* 6*d.*), 2*s.* 6*d.*

CANALS AND DOCKS.—Ellesmen and Chester Canal (100*l.*), 60*l.*; Regent's Canal, 20*l.*; Shropshire Union and Canal (2*l.* 2*s.*), 1*l.* 16*s.*; Grimsby Dock (25*l.*), 21*l.* 5*s.*

LEEDS, THURSDAY.—We have no change in the ordinary state of things here—the prevailing indisposition to operate continues, as might be expected, to lower prices; the same stagnation prevails in every branch of trade and commerce, and is aggravated, if not caused entirely, by the protracted discussion in the Commons upon Sir R. Peel's measures. Until a satisfactory decision is come to in this matter, and the deposit money again afloat, it will be in vain to expect any amendment. The principal feature in our market has been the fluctuations in the price of West Riding Unions, which have varied from 3½*l.* to 5½*l.*—caused by the unprecedented mistake made by the Standing Orders Committee. The matter is now finally referred back to the select committee, and, we are inclined to think, with improved prospects: yesterday they were at 3½*l.* per share—to-day 4½*l.* is the ruling figure.

R. B. WATSON, TOOTAL, & BARFF.

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending Feb. 21, was 19,970; amount of money, £83 4*s.* 3*d.*—(Last year, 109*l.* 10*s.* 1*d.*)

MANCHESTER, BIRMINGHAM CONTINUATION, AND WELSH JUNCTION RAILWAY.—This projected line of railway has, we observe, been declared by the committee as having complied with the Standing Orders, the evidence being afforded which the Legislature requires, as regards not only the capital having been subscribed, but the notices given, and the various little *et ceteras*, in every instance, observed. Messrs. J. and H. Hughes, of Aberystwith, as the local agents, attended the committee, Mr. Bethell being the London solicitor, and the engineering department being deputed to Mr. Thompson. The proposed line, and which we may now consider having passed the first ordeal, will be carried out, many of the principal holders of shares being capitalists, and, moreover, locally interested in the districts through which the line traverses, which commences at Aberystwith, and pursues its course by way of the Devil's Bridge, Llangirrig, and Llanidloes, on to Newtown, a distance of 42½ miles, where it forms a junction with the Shropshire Union Railway—thus communicating with the Crewe station, whereby facilities are afforded by railway to Liverpool, Manchester, and the midland manufacturing districts. As regards the advantages held out by this line, we may observe, that if the facility it affords of communication with Ireland, the distance to Wexford being taken at about 100 miles—while by railway transit to meet the shores of the Atlantic, on the western side, not more than 130 to 140 miles are required, and this communication may be expected at an early day, with the rapid advances making in the Sister Isle, as regards railways—in such cases the distance, or rather the time, between England and America, would be reduced, if we are rightly informed, to eight days—a matter of some importance—and thus would bring the Old and New World closer together, despite the Oregon question. We may observe that the lead mines in the vicinity of Aberystwith [illegible] necessarily be advantaged by the proposed line—while as regards the t[illegible]tween that town, as a seaport and the midland districts, such can be fairly appreciated.

DIRECT LONDON AND MANCHESTER RAILWAY.—After the long protracted and spirited struggle, which have marked the proceedings of the company promoting this line, their petition has been registered for non-compliance with the Standing Orders. There appears to have been many slight omissions, which, probably, would have been looked over in an undertaking of such magnitude; but the one which appears to have proved fatal was upon the evidence of Mr. Pickering, the parish clerk of Measbin, who proved that no plans, or books of reference, had been deposited with him for this line.

RAILWAY SHARE LIST.

RAILWAYS.	Paid	Closing pr. last week.	Closing pr. last night.
Aberdeen	£5	10½	10
Amber, Nottingham, Boston, and Erewash Junction	2½	2¼	2½
Armagh, Coleraine, and Portrush—25*l.* shares	1½	—	1½
Birmingham and Gloucester—100*l* shares	100	126	125
Birmingham and Oxford Junction—20*l* shares	2	2½	2½
Bristol and Exeter—100*l* shares	70	87	86
Bristol and Gloucester—50*l* per share	30	—	56a
Caledonian—50*l* per share	5	13½	13⅝
Cambridge and Lincoln—25*l* shares	1½	—	—
Chelmsford and Bury	1½	—	—
Chester and Holyhead—50*l* shares	15	21½	21½
Cork and Killarney—50*l* shares	2½	—	—
Cork and Waterford—25*l.* shares	1½	1½	1
Cornwall—50*l* shares	5	—	—
Derby, Uttoxeter, and Stafford	2½	—	—
Direct Northern—50*l* shares	2½	2½	2½
Direct Manchester (Remington's)—20*l* shares	2½	1½	1½
Ditto Rastrick's	5½	—	3½
Dublin and Belfast Junction—50*l* shares	10	6½	6
Dublin, Belfast, and Coleraine—50*l* shares	2½	—	—
Dublin and Galway—50*l* shares	4	4½	4
Dundalk and Enniskillen—50*l* shares	2½	—	—
Eastern Counties—25*l* shares	14*l* 16*s*	22	21½
East Lincolnshire	1½	2¼	2¼
Edinburgh and Glasgow—50*l* shares	50	78½	74
Edinburgh and Perth	3	—	—
Exeter, Yeovil, and Dorchester—50*l* shares	2½	—	1½
Goole and Doncaster—20*l* shares	42*s*	3⅝	3⅝
Grand Junction—100*l* shares	100	—	215a
Grand Union (Nottingham and Lynn)	1½	1½	1½
Great Grimsby and Sheffield—50*l.* shares	5	—	9a
Great Southern and Western (Ireland)—50*l.* shares	15	—	21
Great North of England—100*l* shares	100	220	214a
Great Western—100*l* shares	80	154	152
Guildford, Farnham, and Portsmouth—50*l.* shares	5	4⅝	5
Hull and Selby—50*l* shares	50	107½	107
Isle of Axholme	2½	—	1½
Lancaster and Carlisle—50*l* shares	25	57	55½
Leeds and Carlisle	2½	1½	1½
Leicester and Birmingham—20*l* shares	22*s*	—	⅝ dis.
Leicester and Bedford—20*l* shares	22*s*	¼ dis.	⅜ dis.
Leicester and Tamworth—20*l* shares	42*s*	—	—
Liverpool and Leeds Direct—50*l* shares	2½	—	1½
Liverpool, Manchester, and Newcastle Junction	1½	3¼	3½
London and Birmingham	stock.	222	224
London and Birmingham Extension—25*l* shares	1½	—	—
London and Blackwall	Av. 16*l* 13*s* 4*d*	8⅜	8⅜
London and Brighton—50*l* shares	50	65½	65⅝
London and Croydon	Av. 13*l* 15*s* 9*d*	22	22
London and Greenwich	Av. 12*l* 15*s* 4*d*	9⅝	9⅝
London and South Western	Av. 41*l* 6*s* 10*d*	78½	78
London and York—50*l* shares	2½	3½	3⅜
London, Warwick, and Kidderminster—50*l* shares	2½	1½	1⅝
London, Salisbury, and Yeovil—50*l* shares	2½	—	1⅝
Londonderry and Coleraine—50*l* shares	2½	5	5¼
Londonderry and Enniskillen—50*l* shares	5	2½	—
Lynn and Ely—25*l.* shares	5	6⅜	6½
Lynn and Dereham—25*l* shares	5	5	4½
Manchester and Leeds—100*l* shares	82	133½	133a
Manchester and Birmingham—40*l* shares	40	78	77
Manchester, Buxton, and Matlock—20*l* shares	42*s*	¾ pm.	¾ pm.
Manchester and Southampton	2	2½	2⅝
Midland	Stock	150½	157
Ditto Birmingham and Derby	Stock	120	120
Midland Great Western (Irish)—50*l* shares	2½	9	—
Newcastle and Berwick—25*l* shares	10	21	21
Newcastle and Carlisle—100*l* shares	100	—	—
Newcastle and Darlington Junction—25*l* shares	25	43¾	44½
Ditto New (Brandling)—25*l* shares	20	38	38
Newport and Abergavenny	2½	—	—
Newry and Enniskillen—50*l.* shares	2½	½	½
Newark, Sheffield, and Boston—25*l* shares	2½	2½	1⅝
North British—25*l* shares	17½	27½	27½
North Devon	2	—	—
Northern and Eastern—50*l* shares	45	69½	71a
North Kent and Direct Dover—50*l* shares	2½	2⅜	2½
North Staffordshire—20*l* shares	42*s*	3½ pm.	3½ pm.
North Wales—25*l* shares	3½	—	3½
Norwich and Brandon—20*l* shares	18	25½	26
Northampton, Banbury, and Cheltenham	2	1⅞	1⅝
Oxford, Worcester, and Wolverhampton	12½	14	14
Perth and Inverness	2½	2½	1½
Portsmouth Direct—50*l* shares	3⅜	3½	3⅜
Preston and Wyre—50*l* shares	50	35	34½
Richmond—20*l* shares	5	16½	16½
Rugby and Huntingdon—20*l* shares	2	1½	1½
Scottish Central—25*l* shares	7½	16	14½
Scottish Midland—25*l* shares	5	6	5
Sheffield and Manchester—100*l* shares	100	—	131a
Shrewsbury and Birmingham	2½	3½	3
Somersetshire Midland	2½	1½	—
South Devon—50*l* shares	25	—	36½
South Eastern and Dover	Av. 33*l* 2*s* 4*d*	38½	38½
South Midland—20*l* shares	42*s*	2½ pm.	2½ pm.
South Wales—50*l* shares	2½	6½	5½
Staines and Richmond—20*l* shares	1	2½	1½
Trent Valley—20*l* shares	5	26	26½
Trent Valley and Holyhead Junction—20*l* shares	2½	1½	1½
Vale of Neath	2	3	2½
Waterford and Kilkenny—20*l.* shares	3	2½	—
Welsh Midland	2½	1½	1½
Wilts, Somerset, and Weymouth—50*l* shares	2½	3½	—
Yarmouth and Norwich—20*l.* shares	20	27½	28a
York and Carlisle	2½	2	2½
York and North Midland—50*l* shares	50	101	100
Ditto Selby—50*l* shares	30	73	74
FOREIGN RAILWAYS.			
Boulogne and Amiens—20*l* shares	10	12	11½
Bordeaux and Toulouse and Cette (Mackenzie)—20*l* shares	2	2½	2½
Bordeaux, Toulouse, and Cette (Espalete)—20*l.* shares	2	2½	2½
Central of Spain—20*l* shares	2	1½	1
Dutch Rhenish—20*l* shares	5	7	6⅞
East Indian	¼	1⅛	1⅛
Great Northern of France (constituted)	5	15½	15½
Great Western Bengal	¼	⅛	⅛
Great Western Canada—22½*l.* shares	3½	2⅜	2⅜
Jamaica and South Midland Junction—20*l* shares	1	3½	—
Jamaica North Midland	1	—	—
Louvaine and Jemappe—20*l* shares	4	2	2
Lyons and Avignon—20*l* shares	2	2½	2
Luxembourg	4	2⅜	2½
Namur and Liege—20*l* shares	4	3⅜	3½
Orleans and Vierzon—20*l* shares	10	18½	—
Orleans and Bordeaux—20*l* shares	6	11⅜	11⅜
Paris and St. Quentin—20*l* per share	2	—	—
Paris and Orleans—20*l* shares	20	51½	50½
Paris and Rouen—20*l* shares	20	40½	40½
Rouen and Havre—20*l* shares	18	30	30
Sambre and Meuse—20*l* shares	6	5½	5½
Strasburg and Basle—14*l* shares	14	—	—
West Flanders	4	4⅛	4⅛

* Prices obtained from country brokers—no business doing in the London market.

RAILWAY TRAFFIC RETURNS.

Name of Railway.	Lgth. Rway.	Present actual cost.	Last Div.	Traffic Returns. 1846	1845
Arbroath and Forfar	15	£140,782	2½ p.c.	£163 0 0	£175
Chester and Birkenhead	15	520,540	2½	506 0 0	398
Dublin and Drogheda	32	631,258	4	629 12 3	589
Dublin and Kingstown	6	349,736	9	692 16 7	627
Dundee and Arbroath	17	153,568	4	235 3 7	234
Durham and Sunderland	19	302,110	2	572 4 4	646
E. Counties & North. & East.	124½	4,090,328	5	6376 16 0	3484
Edinburgh and Glasgow	46	1,686,226	6	2746 14 1	2045
Glasgow, Paisley, and Ayr	51	1,104,773	6	1849 19 11	1463
Glasgow, Paisley, & Greenock	23	806,134	2	764 0 9	694
Grand Junction Company *	98	2,597,317	10	—	7176
Gravesend and Rochester	6	85,000	5	127 7 7	—
Great North of England	45	1,296,196	6	—	1241
Great Western	220	7,717,043	8	14977 17 10	13729
Hartlepool	—	—	—	883 16 11	—
London and Birmingham†	176	6,207,065	10	32965 8 3	14499
London and Blackwall	4	1,078,851	1½	689 15 4	707
London and Brighton	56	2,653,673	4	3283 12 9	2995
London and Croydon	10	842,592	3½	1058 1 6	813
London and South-Western	93	2,620,724	9	4896 9 3	4405
Manchester and Birmingham	31	1,959,063	6	3818 6 6	3244
Manchester & Leeds	51	3,972,869	8	5347 0 0	6382
Manchester, Bolton, & Bury	10	405,963	5½	980 11 3	866
Midland Company	179	6,284,631	6	14891 9 11	9014
Newcastle and Carlisle	61	1,137,385	5	1160 15 6	1567
Newcastle and Darlington	22½	1,156,370	8	2568 13 10	1026
Newcastle and North Shields	7	316,869	5	419 17 2	373
Norfolk	—	—	—	1179 4 4	181
North Union, Bolton &c.‡	32	1,060,551	6½	—	1287
Preston and Wyre	22	438,614	2	575 15 5	377
Sheffield and Manchester	19	1,313,225	5	1495 2 6	633
South-Eastern and Dover‡	88	4,284,924	3½	5274 15 1	4010
Taff Vale	30	611,073	3½	1100 11 3	940
Ulster	98	358,353	5	—	833
Yarmouth and Norwich‖	20½	250,037	5	—	181
York and North Midland	53	1,279,951	10	4636 16 2	2214
Paris and Orleans	82	2,062,916	8	5875 13 10	3699
Paris and Rouen	84	1,995,306	9	5643 0 0	3003

* The traffic return of this company is now included in the London and Birmingham.
† Including the Grand Junction Company. ‡ Including the Greenwich line.
§ Included in Manchester and Leeds. ‖ Included in Eastern Counties.

PRICES OF MINING SHARES.

Shares.	BRITISH MINES. Company.	Paid.	Price.
235	Andrew and Nangiles	25½	60
100	Barrbtown	22	300
4000	Bedford	2½	5½
320	Birch Tor Tin Mine	10½	12
8000	Blacesavon	50	40
100	Botallack	175	300
120	Brewer	—	35
40000	British Iron, New, regis.	10	24
—	Ditto ditto, scrip	10	24½
128	Budnick Consols	—	30
100	Bwlch Cwmerfin	20	200
1000	Callington	19	25
256	Caradon Consols	45	80
256	Caradon Copper Mine	4½	6
256	Caradon Mines	4½	36
256	Caradon United	19	20
256	Caradon Wh. Hooper	9	10
1000	Carn Brea	15	100
114	Charlestown	—	240
256	Chypraze	—	50
1900	Combmartin	5½	8
128	Comfort	—	44
5000	Con. Tretoll Mining Ass.	3	1¾
128	Condurrow	20	28
2560	Cook's Kitchen	—	8
1000	Copper Bottom	1	5
3200	Cornubian Lead Co.	3	1½
128	Cosheen	20	200
240	Craddock Moor	8	65
128	Creeg Braws	120	80
1024	Devon & Courtney Con.	1	4½
1000	Dhurode	2	5
186	Dolcoath	—	80
10000	Durham County Coal	45	9
128	East Pool	5	55
9000	East Tamar Consols	1	3½
—	East Wheal Albert	1	5
256	East Wheal Alfred	2	12½
94	East Wheal Crofty	—	450
128	East Wheal Rose	50	1500
123	East Wheal Seton	2½	16
512	Fowey Consols	—	80
20000	Galvanised Iron Co.	10	10
10000	Gen. Mining Co. for Irel.	½	½
1000	Godolphin	—	35
256	Gonamena	18	120
128	Goyer	23	200
244	Grambler & St. Aubyn	—	40
100	Great Consols	1000	400
256	Great Calestick Moors	—	11
2560	Great Mitchel Consols	—	2
100	Grogwinion	5	20
1000	Gunnis Lake	1½	3
128	Hallenbeagle	—	50
1000	Hanson	5	1
1000	Harrowbarrow Old Mine	2½	2½
—	Harrowbarrow Consols	2	2
800	Hawkmoor	3	6
6000	Helgnston Down Con.	1	2
256	Herodsfoot	9	14
10000	Hibernian	12½	1
1000	Holmbush	14	26
256	Ivy Tor	1½	5
1200	Kirkcudbrightshire	1½	1½
2048	Lamerhooe Wh. Maria	5½	6½
128	Lanarth & Penstruthal	—	150
200	Larkholes	1	3
160	Levant	—	150
1000	Lewis	5	6
128	Ludcott	3	3
2800	Marke Valley	10	7½
20000	Mining Co. of Ireland	7	12½
1000	Nant-A'r-Nelle	2	2
200	Nanterrow Consols	10½	12
128	North Fowey Consols	10	30
200	North Holmbush	—	15
100	North Pool	11	37
70	North Roskear	10½	600
256	North Treburget	2½	4
100	North United	41	45
128	North Wh. Providence	2½	10
256	North Wheal Rose	22½	40
15000	Northern Coal Co.	23	2
600	Old Delabole Slate Co.	25	45
128	Par Consols	—	500
256	Penhallow Moor	15	5
100	Penrhiw	30	65
128	Pen-y-Cefn Mine	50	55
512	Plymouth Wh. Yeoland	1½	3½
10000	Rhymney Iron	50	33 4
256	Rose Consols	10	7
1000	Rosewall Hill	1	2½
1024	Roscarrock	2½	3
2500	Silver Valley	2	2
256	Sourton Consols	1	5
128	South Caradon	5	450
260	South St. George	9½	15
800	South Towan	10	1½
256	South Trelawney	8½	17
128	South Yeoland	15½	28½
128	South Wheal Basset	—	220
124	South Wh. Francis	—	90
1034	South Wh. Maria	—	3
15000	Irish Southern & Western 1	—	—

Shares.	BRITISH MINES—continued. Company.	Paid	Price
256	South Wheal Rose	2	3
256	St. Austell Consols	6	25
1000	Stray Park	43	21
9600	Tamar Consols	3	6
6000	Tincroft	7	16
256	Ting Tang	67	67
128	Tokenbury	119	84
1024	Trelawney Consols	1½	2
5000	Treleigh Consols	6	3½
256	Trenow Consols	—	165
96	Tresavean	10	300
120	Trethellan	5	75
120	Treviskey and Barrier	61	130
128	Trewavas	—	10
128	Trewellard	12	25½
4000	United Hills	5	4
100	United Mines	300	900
128	West Basset	10	20
256	West Caradon	20	375
128	West Cargoll	2	15
512	West Fowey Consols	40	35
—	West Kekewich Consols	—	3½
256	West Providence	—	7½
200	West Seton	—	40
120	West Trethellan	5	40
256	West Wh. Friendship	2	11
3845	West Wheal Jewel	11	3½
2560	West Wh. Maria	½	3½
2560	West Wh. Mitchell	—	2
256	West Wheal Shephard	—	8
256	West Wheal Tolgus	21½	21½
256	West Wheal Treasury	12	7½
240	Westerlake	3	3
6000	Wicklow Copper	5	17
256	Wheal Albert	10	12
128	Wheal Acland	13	14
256	Wheal Biencowe	—	20
256	Wheal Boscastle	3½	9
128	Wheal Catherine	5½	10
256	Wh. Cleveland	2½	5
68	Wheal Clifford	—	450
1024	Wheal Concord	3½	5
256	Wheal Fortescue	1½	20
384	Wheal Franco	22	50
256	Wheal Gill	17½	16
1000	Wheal Harriet	½	2½
128	Wheal Henry	—	10½
109	Wheal Hope (Zennor)	23	25
256	Wheal Hope	7	1½
965	Wheal Kendall	11½	5
1024	Wheal Maria	1	550
4000	Wheal Martha Consols	4	4
1024	Wheal Mary	1	1½
256	Wh. Mary Ann	5	60
1024	Wh. Mary (Calstock)	2	3
256	Wheal Mary Consols	10	14
256	Wh. Mexico	3	6
256	Wheal Norris	9	12
128	Wheal Penrose	—	5
128	Wheal Pollard	9½	30
128	Wheal Prospect	4	9
128	Wheal Providence	4	—
128	Wheal Reeth	1	60
256	Wheal Robins	13	5
128	Wheal Rose	40	20
512	Wheal Sarah	2½	5
99	Wheal Seton	150	750
256	Wheal Sisters	25½	80
128	Wheal St. Cleer	21½	50
128	Wheal Trannack	19	25
130	Wheal Trelawny	15¼	270
256	Wheal Trevenna	4	4
256	Wheal Trewennan	—	10
128	Wheal Venland	2½	5
256	Wheal Victoria	2	6
127	Wheal Virgin	—	20
1024	Wheal Walter	2	5
256	Wheal Williams	4	21

Shares.	FOREIGN MINES. Company.	Paid	Price
5000	Alten Mining Company	14½	1
15000	Asturian Mining Co.	5	3½
10000	Anglo-Mexican Co.	100	3
3374	Ditto Subscription	25	4
2000	Bolanos	150	4
12000	Ditto Scrip	15	4½
10000	Brazilian Imperial	21	4½
10000	Cata Branca (Braz. Co.)	6½	—
12000	Cobre Copper Co.	40	21
8500	Colombian Co. regis.	55	} 4½
5000	Ditto Scrip	—	
10000	Copiapo Mining Co.	14	1½
20000	General Mining Ass'n.	20	14
5051	Mexican Company	59	6
12000	Mocaubas & Cocaes	25	4½
29320	{ Rl.del Monte, regis. / Ditto unregistered }	28½	{ 4 / 4
	Ditto Red Debentures	—	19
	Ditto Black ditto	—	17
	Ditto Loan Notes	150	117
7000	Royal Santiago	10	12
2000	Pachuca Mines	3	3½
11000	St. John del Rey	15	8
43174	United Mexican	28½	4½

Tamar Consols.—We quoted these shares in our list last week at 5*l.*; the error was not discovered in time for correction—they should have stood at 6*l.*—at which price several transactions took place during that week.

LATEST CURRENT PRICES OF METALS.

LONDON, FEBRUARY 27, 1845.

		£ s.	£ s.	d.
Iron—Bar	a. Wales...*ton*	0 0—	9 0	0
	„ ..London ..	9 15—	10 0	0
Nail rods	„	0 0—	10 15	0
Hoop (Staf.)	„	0 0—	12 0	0
Sheet	„ „	0 10—	13 0	0
Bars	„ „	0 0—	11 0	0
Welsh cold-blast foundry pig	*b* ..	5 0—	5 15	0
Scotch pig	*b*, Clyde	3 12 6	3 15	0
Rails		11 10—	11 15	0
Russian, CCND	*c*..	0 0—	——	
	„ PSI	0 0—	——	
	„ Gourieff	0 0—	14 10	0
	„ Archangel	0 0—	13 12	6
Swedish	*d*, on the spot	0 0—	11 10	0
	„ Steel, fagt.	0 0—	16 5	0
	„ „ kegs	15 5—	15 10	0
Copper—Tile	*f*	0 0—	92 0	0
	Tough cake	0 0—	93 0	0
	Best selected	0 0—	96 0	0

		£ s.	£ s.	d.
Copper—Ordin. sheets,	*lb.*	0 0—	0 0	10½
	„ bottoms .	0 0—	0 0	11½
Tin—Com. blocks	*g.-cwt.*	0 0—	5 0	0
	„ bars	0 0—	5 1	0
Refined		0 0—	5 3	0
Straits	*h*	4 7—	4 8	0
Banca		4 9—	4 10	0
Tin Plates—Ch., IC	*i, box*	1 13—	1 14	0
	„ IX ...	1 19—	2 0	0
Coke, IC		1 7—	1 8	0
	„ IX	1 13—	1 14	0
Lead—Sheet	*k* .....*ton*	0 0—20	10	0
Pig, refined		0 0—21	10	0
	„ common ex.	0 0—19	10	0
	„ Spanish, in bd.	18 15—19	0	0
	„ American ...	0 0—	——	
Spelter—(Cake)	*l*	19 10—19	15	0
Zinc—(Sheet) *m* export.	*	0 0—30	0	0
Quicksilver	*n* .....*lb.*	0 0—	0 4	6
Refined Metal	....*ton*	0 0—	——	

(From our Correspondent.)

The only alteration to notice since last week's *Mining Journal*, is in Scotch pig-iron, of which several parcels have been sold at 72s. 6d. to 75s., and one sale was *reported* on 25th inst. at 70s.; the market has, however, rallied, and very little can now be obtained under 75s.—all other descriptions of iron have maintained their prices.

Communicated by Messrs. Whitcomb and Barton, Old Broad-street.

The metal market has been exceedingly quiet this week. A few transactions have taken place in Scotch pig-iron, a shade under our quotations. No sellers now at less than 77s. 6d. cash.

GLASGOW IRON TRADE.

Feb. 20.—Since the above date the tendency in prices is downwards Several large lots changed hands on Wednesday at 75s., and Thursday and to-day sales were made at 74s. for the low Nos. Even less than the above would have been accepted for a considerable parcel. We quote the price 74s.—*National Advertiser.*

Feb. 24.—Five or six thousand tons could easily have been purchased to-day at 75s., a similar quantity would have at once met purchasers at 70s. to 72s. 6d. We quote the price 73s. 6d.—*National.*

COAL MARKET, LONDON.

MONDAY.—Price of coals per ton at the close of the market:—Adair's Main 13 6—Burnhope Hartley 13 6—Buddles's West Hartley 14 9—Chester Main 14 6—Davison's West Hartley 15 6—Hartlepool West Hartley 14—Hastings' Hartley 15—Old Pontop 12 3—Taylor's West Hartley 14 6—Taufield Moor 16 3—Townley 14 —West Hartley 15 6—Wylam 14 6—Wall's End Clennell 13 3—Gibson 13—Walker 14—Hetton 16—Lambton 15 6—Russell's Hetton 15 3 and 15 6—Stewart's 16—Hengh Hall 14 9—Seymour Tees 15—West Tees 14—Cowpen Hartley 15 6—Lewis's Merthyr 24 6—Sidney's Hartley 15—West Hartley Netherton 15 3.—Ships arrived, 178.

WEDNESDAY.—Adair's Main 13 6—Burnhope Hartley 13—Buddle's West Hartley 15—Chester Main 14—Davidson's West Hartley 15 6—East Pelaw 13—Hartlepool West Hartley 15 6—Hastings' Hartley 15—Holywell Main 15—New Tanfield 12 9—Old Pontop 12—Ord's Redheugh 12 6—Pontop Windsor 12 9—Tanfield Moor 16—Townley 14—Wylam 14 6—Wall's End Berwicke and Co. 14 6—Clennell 13 3—Killingworth 14—Walker 14—Belmont 15—Braddyll's Hetton 15 6—Haswell 16 6—Hetton 15 6—Lambton 15 to 15 3—Russell's Hetton 15 3—Stewart's 15 9—Caradoc 15 6—Kelloe 15 3—Adelaide 15 6—Tees 15 6—Cowpen Hartley 15—Sidney's Hartley 15—West Hartley Netherton 15.—Ships arrived, 127; sold, 52; unsold, 75.

FRIDAY.—Adair's Main 13 6—Chester Main 13 9—Davison's West Hartley 15—Hastings' Hartley 15—Holywell Main 15—Old Pontop 13 3—Wall's End Killingworth 14—Newmarch 13—Riddell's 14—Braddyll's Hetton 15 6—Haswell 16 3—Hetton 15 6—Lambton 15—Stewart's 15 6—Hengh Hall 14 6—Kelloe 15 3 to 15 6—Seymour Tees 14 6—South Durham 14—Tees 15 6—Cornforth 14—Cowpen Hartley 15—Sidney's Hartley 15—West Hartley Netherton 14 9.—Ships at market 84; sold 52; unsold 32.

THE IRON TRADE IN FRANCE.—The fair which took place last week at Besançon, was very fully attended by the ironmasters, the grand object of which was to keep up the high price of iron—10*l.* 10s. per ton. Those of the ironmasters, who have consented to take any lots of cast metal only purchased on the expressed condition that there should not be any fall so as to establish a nominal price. Therefore, those holders who kept back either sold none at all, or very small portions, as the abundant article is threatened with a considerable fall in price,—and no doubt before long it will be possible to purchase it at least 12s. to 56s. less than the established rate. This is the result of the unreasonable high prices of former fairs,—and how much better would it have been to have established a moderate price between the different industries in iron—so that they might have maintained an advantageous position in the markets, but at present it is impossible that they can hold out without a wonderful fall in prices in cast metal, which crisis has arrived. On the whole the iron trade has not been in the depressed state it now is in for some time. This may be accounted for, in a great measure, to the continual inundations during the winter, thereby preventing the free blasting of the furnaces—and another reason is, that the masters, considering that there would be a very great increase in the demand, had considerably augmented their stock at an expensive outlay, whilst there has scarcely been any orders for new railways.

REPEAL OF THE CORN LAWS.—This subject being of universal interest, and affecting alike all classes of society, and, after an almost unprecedented debate, extending over nearly three weeks, the House of Commons having come to a division this morning, shortly before 3 o'clock, we on this occasion step a little out of our usual course, to inform our readers that, with a house consisting of 577, ministers obtained a majority in favour of Sir Robert Peel's measures, of NINETY-SEVEN. On a calculation of the whole house, it would stand thus—for the measure 375, against it 281—majority 94.

FIRE AT WHEAL ROCK.—Yesterday week a fire broke out in the changehouse of this mine, completely destroying the building, which had a tarred roof, and several articles of clothing—the chief of which, however, with some large chests, and other property, were saved.

MINING PROPERTY.—CAPITALISTS who are disposed to INVEST in CORNISH and FOREIGN MINES, will find the present opportunity very favourable for so doing. From large sums having been lately diverted from such investments for railway speculations, standard mines are now selling at prices that will pay the purchaser 20 per cent. per annum for his outlay. There are also other mines that are on the eve of paying dividends, which can be recommended with confidence.

Applications to be made to Mr. JAMES HERRON, mining agent, No. 3, Adam's-court, Broad-street, London. 46

MINING OFFICES, 16, CORNHILL—Mr. R. TREDINNICK (of Cornwall) having established PRACTICAL AGENTS and CORRESPONDENTS in every MINING DISTRICT, whereby he obtains early and accurate information respecting MINES, proffers his services to capitalists and adventurers in the PURCHASE and DISPOSAL of SHARES. Mr. Tredinnick has business to do in the following MINES:

North Roskear	North Pool
Wheal Seton	Andrew and Nangiles
West Seton	Wheal Bucketts
East Seton	South Trelawney
Trelawney	United Hills
Wheal Mary Ann	Grambler and St. Aubyn
East Wheal Crofty	Herodsfoot

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COPPER ORES

Sampled Feb. 4, and Sold at Swansea, Feb. 25, 1846.

Mines.	Tons.	Prod.	Stand.	Price.
Cobre	105	12¾	88⅞	£9 3 6
ditto	100	12½	88½	9 3 6
ditto	96	12½	88½	9 2 0
ditto	90	12½	87½	8 19 6
ditto	76	13	87½	9 2 6
ditto	106	12½	87½	9 0 0
ditto	103	12½	88½	8 18 0
ditto	101	12½	89	9 2 0
ditto	89	13	87½	9 2 0
ditto	109	20	83½	14 8 6
ditto	91	12½	89½	8 11 6
ditto	80	21	83½	15 5 0
ditto	75	12½	86½	8 11 0
ditto	9	16½	85½	11 14 6
ditto	50	12½	88½	9 2 0
Cuba	105	11½	88½	7 19 0
Cuba	102	11½	89	£7 17 6
ditto	100	11½	89	7 17 6
ditto	95	11½	86½	7 14 0
ditto	87	11½	86½	7 16 0
Tigrony	66	6½	106½	5 1 6
ditto	51	6½	107½	4 15 0
ditto	22	4½	114½	2 16 0
Cronebane	100	6½	108½	4 11 0
ditto	19	6½	109½	4 9 0
ditto	12	3	134½	1 15 6
ditto	7	7½	98½	4 15 0
Chili	80	32½	77½	23 0 0
ditto	54	28½	81	21 1 6
Ballymurtagh	95	5½	114	4 0 6
ditto	26	5½	114½	3 15 0
Victoria	50	8½	91½	5 10 6

TOTAL PRODUCE.

Cobre	1280	£12629 17	0
Cuba	489	3835 12	0
Tigrony	139	641 0	0
Cronebane	138	594 2	0
Chili	134	£2978 1	0
Ballymurtagh	121	479 17	6
Victoria	50	276 5	9

Total tons, 2351.—Total amount, £21,434 14s. 6d.

COMPANIES BY WHOM THE ORES ARE PURCHASED.

	Tons.	Amount.
English Copper Company	443	£2656 13 0
Freeman and Co.	139	1780 10 6
P. Grenfell and Sons	54	1138 1 0
Sims, Willyams, Nevill, Druce, and Co.	404½	3067 10 0
Vivian and Sons	662	6991 18 0
Williams, Foster, and Co.	648½	5800 1 6
Totals	tons 2351	£21,434 14 6

Copper ores for sale, March 11.—Knockmahon 130, ditto 116, ditto 115, ditto 111, ditto 85, ditto 86, ditto 77, ditto 76, ditto 71, ditto 70, ditto 31.—Santiago 93, ditto 88, ditto 77, ditto 76, ditto 71, ditto 59, ditto 44.—Cobre 140, ditto 105, ditto 100, ditto 90, ditto 56.—Ballymurtagh 71, ditto 66, ditto 60, ditto 40, ditto 35, ditto 11, ditto 9.—San Jose 109, ditto 101, ditto 81, ditto 72, ditto 29.—Berehaven 121, ditto 120, ditto 100.—Cronebane 53, ditto 50, ditto 37, ditto 26, ditto 23; ditto 19.—Cloga 68, ditto 45, ditto 44, ditto 10, ditto 9.—Havana 72, ditto 61.—Llandidno 76.—Lackamore 60, ditto 8.—Hafodyllan 41, ditto 9.—Ardtully 46, ditto 2.—Vigra and Cloga 18, ditto 16.—Gloster Slag 17, ditto 3.—Sicilian 2.—Total 3780 tons.

COPPER ORES.

Sampled Feb. 11, and sold at Parquharson's Hotel, Truro, Feb. 26, 1846.

Mines.	Tons.	Price.
United Mines	122	£4 16 0
ditto	114	3 7 0
ditto	110	5 3 0
ditto	102	6 4 0
ditto	100	4 1 6
ditto	98	6 5 0
ditto	96	4 2 0
ditto	89	3 6 6
ditto	88	3 10 0
ditto	81	4 19 6
ditto	75	6 14 6
ditto	64	4 2 6
ditto	57	5 17 0
ditto	49	3 6 0
ditto	44	12 5 6
ditto	31	4 0 6
Tresavean	95	5 6 6
ditto	88	3 18 0
ditto	72	2 19 6
ditto	60	3 7 6
ditto	59	6 7 0
Tresavean	49	£2 17 0
ditto	36	3 1 0
ditto	35	1 16 0
South Caradon	123	5 11 0
ditto	106	5 5 0
ditto	63	9 17 6
ditto	40	4 3 0
Fowey Consols	110	6 13 0
ditto	105	4 19 6
ditto	88	6 2 6
Trethellan	68	4 13 6
ditto	66	2 16 0
Treleigh Consols	65	8 8 6
ditto	60	3 12 6
Wheal Sisters	68	3 5 6
Penstruthal	55	3 13 0
ditto	7	5 15 6
West Trethellan	21	3 7 0
North Downs	18	6 7 0
Bissow Slag	5	11 1 0

TOTAL PRODUCE.

United Mines	1320	£6515 6	8
Tresavean	494	1952 17	6
South Caradon	332	2027 5	6
Fowey Consols	303	1792 17	6
Trethellan	134	592 14	0
Treleigh Consols	125	765 2	6
Wheal Sisters	68	£222 14	0
Penstruthal	62	241 3	6
West Trethellan	21	70 7	0
North Downs	18	114 6	0
Bissow Slag	5	55 5	0

Average standard, 110*l.* 10s.—Average produce, 7.—Average price per ton, 4*l.* 19s. 6d.—Quantity of ore, 2882 tons.—Quantity of fine copper, 900 tons 15 cwt.—Amount of money, 14,259*l.* 18s. 6d.—Average standard of last sale, 93*l.* 4s. 0d.—Average produce ditto, 9½.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount
English Copper	564½	2639 6 0
Vivian and Sons	358	2120 18 0
Freeman and Co.	392½	1928 11 6
Crown Copper	57	190 19 0
Sims, Willyams, and Co.	473	2411 9 0
Williams, Foster, and Co.	1020	4966 15 0
Total tons	2882	£14,259 18 6

Copper ores for sale on Thursday next, at Serpell's Hotel, Pool.—Mines and Parcels. North Roskear 700—Consolidated Mines 585—Tincroft 440—Hallenbeagle 432—Fowey Consols 247—East Wheal Crofty 240—South Wheal Basset 221—South Roskear 200—Wheal Harriet 187—Dolcoath 169—Wheal Clifford 133—Creeg Braws 110—Ting Tang Consols 86—St. Austell Consols 52—South Wheal Francis 50—North Pool 35—Wh. Tryphena 13.—Total, 3900 tons.

Copper ores for sale on Thursday week, at Andrew's Hotel, Redruth.—Mines and Parcels.—Carn Brea Mines 507—Wheal Prosper 350—United Hills 332—Par Consols 320—Levant 235—Trenow Consols 182—Botallack 171—Wheal Buey 98—West Wheal Treasury 66—Wheal Buller 44—Wheal Rodney 17—East Relistian 4—Wheal Weeth 3—East Crinnis 1.—Total, 2330 tons.

BLACK TIN

Sold on the 23d February, 1846.

Mines.	Tons.	Price.	Amount.	Purchasers.
Chyprazе	2	£61 15 0	£123 10 0	Bolitho and Co.
ditto	4½	60 12 6	272 16 3	Ditto
ditto	2½	55 10 0	138 15 0	Ditto

Total tons, 9.—Amount of money, £535 1s. 3d.

NOTICES TO CORRESPONDENTS.

Our next Journal will be on the usual enlarged sheet, and will contain many valuable papers, and much scientific and miscellaneous intelligence; also those letters, &c., from correspondents, which are unavoidably deferred.

KIRKCUDBRIGHTSHIRE MINING COMPANY.—The letter we alluded to in our last, as having been received from an anonymous correspondent, complaining of neglect on the part of the committee in communicating information to the shareholders, and of the purchase of an old engine, requiring extensive repairs, &c., has since been properly authenticated, and we have been requested to give it insertion in our present Journal. Having published the substance in our last, we trust the committee will meet "A Shareholder's" views, by communicating the necessary information—for which we shall gladly devote space—and thus render the publication of censuring letters unnecessary—at all times a most unwelcome part of our duty.

WHEAL SISTERS MINING COMPANY.—In the Journal of the 7th inst., we published the communication of a correspondent, containing some strictures on the system of management pursued at this mine, which was promptly responded to by the captain: following which we received a rejoinder, which—besides being of too personal a character—we considered ineligible, the writer not being known to us, and so expressed in our Notices to Correspondents of the 14th inst. This has brought a letter—couched in a spirit, certainly, unworthy him we guess to be the author. We have ever endeavoured to conduct the Journal in an honest and impartial manner—guarding, wherever it was possible, from in the least wounding the feelings of individuals, or injuring property, and at the same time courteously and fully attending to those correspondents who might conceive they had cause for complaint—softening the asperities of some, and meeting the arguments of others—but we cannot, for an instant, allow so groundless a charge to stand unrepudiated, as that of permitting "E. A. C." (Liskeard), or any one else, to interfere in our arrangements—much less to act as "Director-General."

Erratum.—In Mr. Greenhow's letter, in last Journal, 32 lines down, second column, page 86, for *centrifugal*, read *centripetal*.

SOUTH-EASTERN RAILWAY.—*Erratum.*—In Mr. Troup's letter, published in last *Mining Journal*, the words—"No doubt there *were* some honourable men in the management"—should be, "No doubt there *are* some honourable men in the management."

THE MINING JOURNAL

And Atmospheric Railway Gazette.

LONDON, FEBRUARY 28, 1846.

Not being able to present our promised statement on the subject of free trade in ores and metals, in so perfect a form as we contemplated, we have considered it advisable to postpone its insertion until next Journal. It would, however, be remiss on our part were we to allow the events of the passing week to go by unnoticed, and, more especially, when we find that Members of Parliament condescend to observe on the metal trade—while we admit the Premier set them an example, when treating on *feathers* and tin. One or two words, then, on the question raised, which we shall, however, entertain at greater length, when taking the subject of ores and metals into consideration. We find that Mr. MUNTZ, the Member for Birmingham—albeit a free trader—was honest enough to differ from the Premier, who asserted that free trade had, in every instance, benefitted this country; and, as an illustration, he cited the instance of zinc, or spelter, which from a price of 75*l.* per ton had fallen to 12*l.*, and might now be quoted at 20*l.*—and an injury thereby, by the reduction, or, in fact, the abolition, of an import duty on foreign zinc, inflicted on the miner and smelter at home. It is true Sir G. CLERK did attempt to contravert the statement of the hon. Member, and what were the arguments he propounded? He tells us, forsooth, that an increase of foreign zinc has attended the alteration made by the tariff, as to the import of that metal; at the same time forgetting to state that, while the consumption has increased, and, consequently, the demand, that the make at home has become "next to nothing." We do not purpose entering into figures, but one or two words are necessary to set matters straight, and to enable our readers to judge of the value to be attached to the statistics of Sir G. CLERK and the Government, represented by him. In the first place, that gentleman refers to manufactured zinc, forgetting or mistaking the observations of Mr. MUNTZ, which applied to spelter, or zinc, as manufactured, or produced, from the ore, and not manufactured articles—the importation of which is too absurd, even one would have supposed to have entered into the imagination of the Premier, or one of his cohorts. Now, as some slight evidence of the effect produced, we may observe that, some years since, not only were there three works for making ingot brass at Bristol, including those of HARFORD's, where sheet brass and ingots were made, the process being by cementation, shot copper being employed with calamine, from the Mendip and Derbyshire Hills, but also three establishments at Birmingham, and also one at Cheadle, and another at Stone, then existed. Where are they now?

We have received a document, which has just been issued from the statistical department of the Board of Trade, giving an account of the principal articles of foreign and colonial merchandise imported and exported into the United Kingdom during the past year—as compared with the preceding—from which we select the following, as of importance to our readers:—

		1844.	1845.
IMPORTS—Tin	*cwts.*	12,085	25,588
Saltpetre and nitre		349,870	465,924
EXPORTS—Iron and steel		2,590,833	2,556,486
Copper and brass		1,644,248	1,702,345
Hardwares and cutlery		1,745,519	2,194,523
Salt		213,746	218,941

We regret to observe that the spirit of discontent again pervades the coal mining districts; and notwithstanding the vast increase in the coal trade, by which not a man need remain idle a day, or be without the receipt of fair wages, numbers are out on strike,—and the consequence is, that the demand exceeds the supply, and a considerable rise in price will probably be the result. The misguided men are not without their instigators. We find that, at a meeting on Felkington Moor, in North Northumberland, for the object of discussing the propriety of demanding an advance of wages at the approaching hiring day, in the first week in March,—Mr. DANIELLS, the editor of the *Miners' Advocate*, Mr. SWALLOW, a deputy of the Miners' Association, and others above the grade of colliers, attended for the express purpose of urging the men to persevere in a course which can only end, as all these "strikes" have ended, in self-inflicted misery to themselves, and cruelty to their families. The following resolutions were passed:—"That this meeting believes that the National Association is capable, if fairly carried out, of accomplishing the objects for which it was established, to shorten and equalise the hours of labour, and to obtain the highest possible amount of wages for the labour of the miner; we, therefore, pledge ourselves to stick to the association."—"As the binding day is fast approaching, it will be for the mutual advantage of the miners to stick to each other; that a respectful petition be presented to the masters, praying for an advance of threepence on the payment for a "darg," or day's work; and, if refused, that another meeting be held to consider what ulterior measures should be adopted."

In Lancashire, the colliers still remain on the strike—coal having, in consequence, within the last month, advanced 2d. per cwt.; and a large meeting was held at St. Helen's, on Monday last—when Mr. ROBERTS again took the field in his unholy calling, accompanied by four delegates, who warmly addressed the assembly, urging that the only way for the colliers to increase their wages, was to stick to the union—yes! stick to the union, and keep up the lawyers and the delegates' pay. When will these deluded men have their eyes opened, and really be awake to their interests?

With feelings of sincere gratification, we refer our readers to the report of the half-yearly meeting of the Irish Waste Land Improvement Society, which will be found in another column. After eight years of unwearied patience, and the most praiseworthy perseverance on the part of the directors, they have solved a long disputed problem, by proving that, by a careful and judicious mode of proceeding, capital can be securely and advantageously invested in property in Ireland; and that, by tact and modification, the simple, but obstinate sons of Erin's prolific soil, may be taught the duty of

blindly treading in their forefather's steps, unmindful of the advances of the age they live in—that they may be convinced that, by moderate exertion, under mild and beneficient laws, the comforts of life are to be attained by all, and that those comforts consist in something more than the blackened and frail mud cabin, the whiskey-bottle, and the pipe. Such advances have the society made in the profitable cultivation of districts of land—great portions of which a few years since were pure, unmitigated *bog*—that they are now, from well-earned experience, in a situation to invest further capital in similar undertakings; and what a fine field is now open to the Government to further the welfare of the Sister Isle. There are in Ireland 6,000,000 of acres out of cultivation—4,500,000 of this amount are calculated to be capable of being turned to agricultural purposes, a considerable portion, and some of the best of these are Crown lands, and, by granting to the society portions of these at a nominal rental, for a term of years, to be drained and cultivated in small holdings, on the plan which has already been followed out with so much success, how many able-bodied men, with their families, who are now dosing their existence away in the newly-established Union Prisons, would become industrious, useful, and happy members of society. We sincerely trust the able and well digested report of Col. Robinson—a copy of which will, we understand, be forwarded to various members of the Government—will be perused with that deep consideration which its importance deserves, and that the encouraging truths there recorded, will induce them to patronise and support the society, and even to place themselves in communication with them as Government agents, in the beneficent objects of realising the peasantry of Ireland from their present degrading thraldom in the bonds of idleness, poverty, and crime, and place them in that situation in civilised life, to which, as fellow subjects, they are entitled.

DIRECT LONDON AND EXETER RAILWAY COMPANY.

The importance of a railway to connect Exeter with the metropolis in a direct line, and thus open a channel of communication with the west of England, independent of the circuitous route by the Great Western, induced several gentlemen, in April last, to form a company for carrying out such project. The necessary preliminary steps having been taken, an influential provisional committee was formed, the company provisionally registered, the shares allotted, deposits received, and everything promised that this important great trunk line, passing through some of the finest agricultural districts in the kingdom, would have met with the desired success in Parliament, and have been carried out with that perseverance and spirit which the interests and convenience of the public demanded. Unhappily, dissensions broke out among the executive; and, five days before the 30th of November, when all should have been prepared for going to Parliament, it was discovered that upwards of 4000 notices remained to be served—a number which it was found totally impracticable to attempt, without incurring almost ruinous expense—and it became evident, notwithstanding the undeniable good qualities of such a line, in every point, in facility of construction, extent of traffic, amount of population, and commercial certainty of its being a good paying line, it was found imperative to give up all hope of fulfilling the requirements of Standing Orders, to enable them to go to Parliament in the present session, and was, therefore, entered as a *project*; so that, provided the House followed the practice of the last session, they should still be in a situation to go through committee. Parliament has, however, altered their mode of proceeding—by not allowing any undertaking to be entered as a project—and the whole proceedings are, therefore, unavoidably deferred.—A meeting was held on the 15th of Dec. last, when it appeared that, out of 58,000 shares allotted, only 23,495 had been paid upon, producing 32,305*l.*, and that there remained a balance in hand of only 492*l.* 14*s.* It was agreed at that meeting that shares should be issued to the extent required, and that whatever steps could be taken with the balance in hand, to forward the undertaking, should be adopted; and a committee (consisting of Sir Bruce Chichester, Dr. Phillimore, and Mr. Chambers), was appointed, to thoroughly investigate the liabilities, claims, and accounts of the company.—A very numerous meeting was held at the London Tavern, on Monday last, the 23d inst.,—Sir B. Chichester in the chair,—to receive the report of the committee, when a very strong discussion arose.—The Chairman opened the business by calling the attention of the meeting to the vote of thanks which was passed to him at the last meeting, for which he returned his warmest acknowledgments; but the pride and pleasure was somewhat alloyed, by the slur which had been attempted to be thrown upon those who acted with him, by the resolutions passed at the meeting, held on the 9th inst.; but he believed his colleagues to be highly honourable men, and they had exerted themselves to the utmost for the interests of the company. He then called upon Mr. Tyerman, the solicitor, to read the report of the committee.—It stated that they had carefully examined all the claims upon the company, since the retirement of Mr. Colombine as solicitor to the company, amounting to upwards of 6000*l.*, many of which they had considered exorbitant, and the result of their exertions had been the reduction of this amount to such an extent that they had saved to the company the sum of 2682*l.*; they had disputed Mr. Braithwaite's claim for engineering services of 5533*l.* 6*s.* 5*d.*, in addition to the large sum of 8105*l.*, which he had already received; also it was discovered that the most gross errors existed in laying out the line—in fact, to such an extent that it was impossible to construct the railway from his data; that gentleman had brought his action, and, under the advice of eminent counsel, they were defending it, and there was every reason to hope they should be successful.—From the accounts, a printed copy of which had been sent to each shareholder, it appeared that there was a balance in the hands of the bankers of 1810*l.* 4*s.* 2*d.*, even taking into account all the claims to the fullest extent; but, it appeared, the total assets, now in hand, were about 8000*l.*, subject, however, to Mr. Braithwaite's claim, and a few other liabilities.—Mr. Vallance, of the firm of Vallance and Vallance, solicitors, of Essex-street, then addressed the meeting at considerable length: he believed the three gentlemen who formed the present committee to be incapable of a dishonourable action; nor did he charge them, under all the mismanagement of the company's affairs, with putting a single shilling into their own pockets; but he charged them with utter incapacity for the business they had undertaken. He then commented, in detail, upon the various points on which he rested his complaints against the committee; the most prominent being, that the subscribers' contract and Parliamentary deed had been fraudulently drawn; under it they could never pass the Standing Orders, and it possessed but one date for the whole number of signatures, when the Standing Orders of Parliament required that it should specify the dates of each, and they could not all have signed in one day: he deprecated in strong terms the conduct of the committee in allowing the purchase of shares, which he considered an abstraction of the shareholders' money, for stock-jobbing purposes: he would stake his professional reputation on the opinion which he gave, that the provisional committee were liable for every shilling of the deposits paid upon the scrip: he recommended a subscription to enable them to fight the battle together, and moved an amendment to the adoption of the report:—"That the affairs of this company be immediately wound up, and that Sir Bruce Chichester, Dr. Phillimore, and Mr. Chambers, be authorised, and requested, to divide amongst the shareholders the money and funds, stated this day to be in their hands; and that the same shall be done, so as not to prejudice the right of the shareholders to claim the deficiency (if any) which may be due to them on their deposits and scrip after such payment." A very protracted discussion ensued, between the members of the provisional committee and other parties, but upon matters totally foreign to the report, and to Mr. Vallance's resolution; and charges were made most freely, and as freely returned.—The meeting was addressed by Mr. Colombine in explanation of the charges made by the committee against him, and in vindication of his own character; by Dr. Phillimore, Sir H. Pynn, the Messrs. Cohen, Mr. Neild, and other gentlemen—when amidst a scene of the greatest uproar and confusion, and when it was difficult to comprehend what was really put from the chair, we understood the report to be adopted, and Mr. Vallance's resolution to be negatived; and a resolution, empowering the directors to take steps to recover the deposits from those to whom shares had been allotted, was passed.—A vote of thanks was then passed to the chairman and directors, and the meeting separated, after five hours' duration.—[Since the above was in type, we have received from Mr. Colombine, the *retired* solicitor of the company, a long letter addressed to Sir Bruce Chichester, the chairman. The late hour at which this has come to hand, precludes the possibility of its insertion this week, or our saying more than that it involves very grave questions affecting the committee, and that we will do such justice to it, as its merits may deserve, in our next publication.—Ed. M. J.]

Original Correspondence.

MINING IN AMERICA—OUR COLONIES.

Sir,—Your Journal affords frequent proofs of increasing discoveries abroad of large districts abounding in rich copper ores, and as our Government have already given a large bonus to encourage further discoveries at the expense of our home mines, they have only one step further to go, and to yield all to the importunate Yankee, foreign, and slaveholding interests, and thus to force the mining population of Cornwall particularly, only the more rapidly to seek a livelihood among our rivals, or our foes, for that work in which they are alone skilled, and which has, for centuries, enriched this country. The Americans need no longer employ emissaries or agents in England, to entice or kidnap our artisans, labourers, and miners; there is a section of traitors in disguise, who are lending every aid to effect that object, and while they have a present prospect of filling their pockets, their nationality does not carry them so far as to care for the future fate of their country or her colonies. The Americans want our miners to open out the country around Lake Superior; it abounds in copper and other ores, as well as wood—there is plenty of coal too in Pennsylvania. Capital, labour, and skill in mining alone are wanted, which our smelters would find out very soon, should they aid the petitioners, and combine in stopping a few more copper mines in Cornwall. Our manufacturers, too, will find that if capital is advanced to work American mines, Pittsburgh will not be satisfied in being only a second Birmingham. However, Cornish copper ores may still, for some time, be useful as fluxes, till others are discovered, and as no districts are yet known that can quite swamp the markets with tin, they may be allowed, while the unusual demand continues, to draw out a still longer existence. England has colonies rich in every mineral and earthly produce, yet they are neglected; half our emigrating population are encouraged to join our rivals, or our foes, and capital is sent to establish competition against our own country, and tens of thousands of our own British born population are forced in array to bully and to threaten us with war, should we dissent to the terms they dictate to us. It is this want of nationality that renders us so easily alarmed, by which Great Britain is losing her character for courage and firmness, and becoming the dupe of foreign policy.

Penzance, Feb. 22. A Recent Traveller in the U. S.

WALL'S IMPROVEMENTS IN METALLURGY BY VOLTAIC ELECTRICITY.

Sir,—Having seen an article on this subject in the *Mining Journal* of the 14th inst., I obtained a pamphlet thereon lately published, in the hope that I should have been enabled, from its contents, to have made myself thoroughly acquainted with the mechanical details, and with the chemical *rationale* as to the affinities and repulsions set in operation by this powerful and singular agent when in contact with metals in a fluid state. To my surprise, however, it contains no such information; the work is professed to be written by other parties, and is merely an account of various experiments tried in different parts of the kingdom, with the result and testimonials, all, *of course*, in favour of the electrised iron. It is acknowledged that the battery is an agent of that complex nature as to completely puzzle the ignorant workmen, and, consequently, continually liable to derangement; and, although it is stated that Mr. Wall has succeeded in forming one on the most simple principle, which never need be removed, and the conductors from which may remain attached to the furnace, we have not the slightest description of its formation to enable a judgment to be formed as to its effects. I do not, for one moment, attempt to doubt the correctness of all the statements as to the results of the various experiments here recorded; but I cannot help thinking that a scientific man, conducting a powerful battery, in connection with an iron furnace, is a very different affair to leaving so dangerous an auxiliary in the hands of the usual attendants on an ironwork, that, in his presence, with a knowledge of the effects and great care in the elaboration, such results, as stated in the pamphlet, would take place; but that, in his absence, it would be erroneously employed, and do considerably more harm than it could effect good—in fact, that it is a beautiful philosophical toy, clearly demonstrating the effects of electricity on the metals, but one which can never be brought into beneficial employment on a large scale in the smelting of iron, &c.

Tipton, Feb. 25. An Iron Smelter.

NEW IRON-WORKS, NEAR NEWCASTLE.

Sir,—I beg to enclose you a report of some blast furnaces blown in by Messrs. Bolckow and Vaughan, in the valley of the Wear, about 15 miles above Darlington. There are some more works erected, and some in the course of erection, in this locality. The samples of pig I have seen, do not augur any great expectations. I have also seen some converted into the finished state, but it evinces a tendency to be red-short, and takes much labour in the process of puddling. The ore, I am informed, contains a considerable portion of lead in its composition—in fact, the ore is obtained just above and below the lead measures, and is in very close approximation to the veins of lead ore. The fire clay in this valley, is also very inferior; it is filled with iron ore specuin, something resembling the shot ore in the Forest of Dean. The above firm have a rolling mill in Middlesborough, on the banks of the Tees, in the North Riding of Yorkshire, capable of turning out about 600 tons of rails and bars per month: before the erection of these furnaces, they used to convert Scotch pigs at these works into finished bars and rails.—An Observer: *Poultry Chambers, Feb.* 25.

[We are obliged to our correspondent for his attention: the report will be found in another column.]

MINERAL RESOURCES OF IRELAND.—No. I.

Sir,—Perhaps there is no part of the British dominions that more deservedly claims the attention of the observing and practical geologist and miner than the counties of Cork and Kerry, to which counties I mean to devote a few letters, with your permission, as preliminary to the consideration of other parts of Ireland which I have explored.

In almost every district of these counties mineral indications, of promising aspect, present themselves at surface, in favourable positions for development and extensive workings. Water-power and water-carriage are almost everywhere available; and, now, as railway enterprise is in full action, distances, even to the most remote parts of Ireland, from any station, are of little moment. The intercourse between England and Ireland is no longer a difficulty, nor is there any part of Europe where a more kindly spirit to visitors is exhibited, nor more civilised in moral and religious feelings, than the inhabitants of these localities. With all these inducements, there is, in Ireland, either an apathy, or a want of detail, or some other cause, which holds capitalists, except very few, back from mining enterprise. An alleged want of capital has been often quoted; but as this is, as it were, in an overflowing state in prosperous and happy England, to the independence and enterprise of which country I particularly address these letters—as it pours its refreshing waters to fertilise and enrich almost every part of the world, yet to no place of more remunerative prospect than Ireland—may it not be worthy of the consideration of speculators to view Ireland as it really is—an island of most important notice, in regard of its subterranean treasures. It is true, there are many mines open as present in several parts of Ireland; but all, with few exceptions, rather in an infant state. If these were worked with spirit, and to proper extent, as in Cornwall, and other parts of Great Britain, the result would I doubt not be be found equally successful; with the few thus worked at present—namely, Knockmahon, and its adjacent mines, Berehaven, Cronebane, Ballymurtagh, Tigroney, Connorree, Cosheen, and some others. The veins and lodes are chiefly found in the primary and secondary formations, generally continuous, and holding ores of superior richness. The ore ground is kindly; the native miners and labourers, when treated with justice, are tractable, and hard-working, and every facility to carry out the intentions of companies, entering on or already engaged in mining, may be had immediately, and with little cost. Yet, with all these advantages—with a certainty of success (speaking analogically, on the successful issue of the mines in full work, founded on the profits and, of course, produce, as taken from the half-yearly returns, quoted from your Journal for 12 or 14 years back)—the mines of Ireland are in a most passive state.

Now, what is required to give life to this neglected division of national importance—the working of the mines of Ireland? *Capital, prudential economy, persevering energy*, and, though last, not least, *a complete amalgamation of English and Irish interests*. The landed proprietors are called on to give encouragement to induce speculation—let them give setts at fair royalties, say from 1-15th to 1-24th, or requiring no return till the credit side of the company's accounts exceed the debit—let them take shares, and become thus still more interested in there own concerns; and thus inducements will be held out to encourage extensive adventure. Proprietors of estates should recollect, that in insuring continuous remunerative labour to their poorer tenantry, they are studying their private and public interests, securing their rents, and assuring the peace of the country, and while labour is constant and *paid for*, there is neither time no opportunity for plots, or evil discussions. It has been advanced, with some show of authority, that mines are *worked out* in a few years; that the mineral treasures of estates are swept away by greedy adventurers, before the proprietors can receive returns adequate to their expectations, and that, thus, unless they obtain a high royalty *at first* they will probably lose all. Now, this is (to speak broadly) a vulgar and false doctrine, no matter from what quarter it comes. No mine is of the fugitive character thus supposed. It is true, that in mines one may and does disappear occasionally—nay, scarcely a trace of vein or lode is discernible at times; but these disappearances are explainable by the experienced and skilful miner, who traces the apparently lost veins, perhaps for fathoms, and finally recovers the ore-bearing ground to repay the labour and expense attending. If we study the history of mining, we shall learn that almost all the rich mines now working were at one time or other abandoned; but on further pursuits, with more powerful machinery, and skilful management, they have become, as it were, new repositories of wealth, increasing in production proportionably to their depth and extent of working,—and thus, in fine, proving of continually increasing interest to the landed proprietor, or lord of the mine. The study of mineral veins is most important to the practical miner, or mining surveyor, the many doctrines, or rather theories, introduced from time to time, are, it is true, ingenious, but of no practical avail whatever; but are rather systems of learned display than of utility. If your numerous correspondents were to take this subject into consideration, and give descriptive sections of worked and working lodes and veins, stating the nature of the rocks in which they were or are found, and other important points of information connected with their mines, it would advance our knowledge on this most interesting subject much more than the study of speculative authors. I will endeavour to add my mite on this subject as regards Ireland—a country in which I have been engaged upwards of 20 years in examination of the mineral and other products, in which country I could point out mining localities, many of which are as yet unnoticed, that would give remunerative employment to thousands.

My next letter will treat of the descriptive geological and mineralogical features of the south-west of Ireland, in respect of its mining interests.

London, Feb. 24. St. Pierre Foley.

WAY-LEAVE, RIGHT OF TRANSIT, &c., THROUGH TUNNELS.

Sir,—Being a constant reader of your Journal, which contains the most accurate information on all subjects relating to mines, minerals, railways, &c., I beg that you will oblige me with an answer to the following question:—"If a tunnel is made through a hill, underneath a town, &c., for the purpose of a railroad, canal, aqueduct, &c., to whom is due the compensation for way-leave, right of transit, &c.? Have the proprietors and occupiers of the land, or the owners of the royalties, mines, minerals, boundaries, &c. (to whom have descended all the rights of the Lord of the Manor) the proper claim for payment for the right of transit through the property granted by Act of Parliament to the undertaking of any proposed railway, canal, &c.? Have not the possessors of the surface of the land a right to compound with the proprietors of the canal, railway, &c., for the proposed line, when it is on the *surface* of the earth? and, have not the owners of the royalties, &c., a claim for payment of any tunnel *underneath the surface*—all just compensation being made to the possessor of the *surface*, for any contingent injury that might accrue to *their* property on the said surface? Among other cases recently decided, the late case of "Rosse and Wainmain" seems to apply. In this case, it was decided that the owner of the royalties had a right of compensation for everything dug or taken out of the earth, and every interference with what is beneath its surface—the word "minerals" meaning everything dug out of the earth. The possessors of houses, farms, &c., according to this decision, have a right to make cellars, drains, &c., for the convenience of their said houses, farms, &c.; but everything taken out of, or done with, what is underneath the surface, from which profit can be made, belongs to the owner of the royalties.—An answer to the above, from some of your well-informed correspondents, will oblige—A Proprietor: *Haydon Bridge, Northumberland.*

[We think the questions put by our correspondent are not by any means difficult of solution; with respect to *surface* occupiers, every Act of Parliament constituting a railway company, ensures compensation to all parties injured, and secures the continuance of all lanes, roads, bridges, water-courses, &c.; but, in the case of a tunnel, there never having been a *way* before the company made it, the *right of way* is, of course, in them alone. But whatever minerals might be discovered, would be the property of the lessee, and, if sufficiently valuable to induce him to work them, he must make arrangements with the company for the use of their tunnel for their extraction.]

PARSEY'S COMPRESSED AIR-ENGINE.

Sir,—I observe in your Journal of last week some calculations from "An Engineer," on the subject of Parsey's compressed air-engine, wherein he takes for his data, that Stephenson's engine draws 40 tons at 35 miles per hour, and evaporates during that period 77 cubic feet of water; this effect he compares with that of compressed air, and states, that a receiver of the capacity of 100 cubic feet, and charged with 60 atmospheres, will more than equal the former, to quote his own figures, "in the proportion of 279,303,640 lbs. to 387,800,000 lbs. raised 1 ft." Now we have—

By steam, $77 \times 1711 = 131{,}747$ cubic feet, at atmospheric pressure.
By air, $100 \times 60 = 6{,}000$ ditto ditto,

$125{,}747$ = difference of bulk uncompressed.

How "An Engineer" could attempt to make apparent that these two forces are equal in motive power at 60 atmospheres, or under any other pressure, is to me surprising; or, by what means this enormous discrepancy is to be accommodated in practice, is not explained; perhaps the author will enlighten me? and, if he cannot discover the errors, not only of his calculation, but of the system as an *economic* one, I shall be happy to point them out.—F. Ham: *Victoria-street, Norwich, Feb.* 23.

PILBROW'S ATMOSPHERIC RAILWAY.

Sir,—Can you, or any of your readers, inform me, how Mr. Pilbrow's atmospheric railway progresses? I often see it advertised, but have not seen or heard of any *practical results*. I visited the Adelaide Gallery a short time since, and was told "that the model there was so dangerous in action, that they dared not exhibit it, and that the plan needed great improvements before it would be practical." Is not this scheme somewhat of the same *class of invention* as his patent condensing cylinder steam-engine, which was to have worked such wonders? perhaps one of the shareholders would oblige me by answering these queries?—F. Ham: *Norwich, Feb.* 23.

MAGNETO-ATMOSPHERIC RAILWAY.

Sir,—I notice in your Journal of the 14th instant, an article headed "Magneto-Atmospheric Railway," and referring to a proposed plan of employing electro-magnetism as a means of attaching a railway train to the piston within the atmospheric tube. To the readers of this paragraph, has, doubtless, presented itself—in common with the writer—the difficulty of giving to a series of magnets a power over iron bars, placed at the distance of even three-fourths of an inch from their poles, sufficient to overcome the inertia of an ordinary railway train, for such must be their efficiency to render the plan a practicable one; but, without further alluding to a difficulty which I can suggest no means of overcoming, allow me to point out another defect, which, left unremoved, must be fatal to the success of the contrivance, but for which, I flatter myself, I am in a position to suggest a remedy. I allude to the details thus described:—"Fixed to this carriage, will be several large bent-iron bars, capable of being converted into magnets of an attractive power of many tons. These bars, prepared with the coating of copper wire, will descend to within a very short distance of the upper part of the tube. * * * * The piston in the tube is furnished with bars of iron, which ascend and almost touch the thin copper in place of the valve, and the magnets above, and the iron bars on the piston below, are separated only by a distance of perhaps three-fourths of an inch."

Now, Sir, you will at once perceive that the tendency in the magnets of the carriage, and the bars of the piston, to approach each other, which is in fact unavoidable from their relative attractions, must produce a degree of adhesion in the case of the carriage to the rails, and of the piston to the internal and upper surface of the tube, which would, unquestionably, entail a ruinous amount of friction.

As a remedy for the defect alluded to, I beg to remark, that the magnetic attraction should be made to act in a horizontal, instead of a vertical, direction. By causing the iron bars within the piston to cross its *horizontal* diameter, placing the horse-shoe magnets so as to embrace the upper half of the tube, and providing for the nearest practicable approach of their poles to the extremities of the bars; the lateral forces called into action, would be in exact equilibrium, and, without impairing the efficiency of the contrivance alluded to in your Journal in any respect, would (I submit) entirely obviate the immense friction which is involved in its form as there detailed.—J. W., jun.: *Gwennap, Feb.* 19.

GREENHOW'S GEOMETRICAL RAILWAY—SOCIETY OF ARTS.

SIR,—As you have hitherto been kind enough to insert in the *Mining Journal* my remarks, &c., respecting the geometrical railway, I take the liberty of again trespassing on your patience. In the first place, in justice to Mr. Russell, I must say, that had I at all supposed an opportunity would have been given me, on a future evening, to reply to his concluding address, made at the Society of Arts, on the evening of the 18th inst., I should not have written the letter I did, which appeared in your paper of Saturday last: when I wrote it, I was certainly under the impression, that the matter was ended, so far as the Society of Arts was concerned; and I think I shall not be wrong in stating, that such was the impression left on the minds of all who attended that meeting. I was sorry that, on the evening of the 25th, after I had made some observations, in reply to the objections raised, a member of the society, interrupting a gentleman who wished to speak, suggested that the discussion should end, which being adopted by the chair, prevented my exhibiting models of a railway and carriage made on the old plan, and also entering into those explanations which would have elucidated the subject—as had such been laid side by side with the geometrical arrangement, the great advantage of the latter system would at once have been apparent. The only way to test the power of resistance to lateral displacement, is by elevating one rail above the other; that having a similar effect to the removal of the proper relation between the carriage and its centre of gravity. By this test, when the upper rail was elevated to 22½ degrees above the level of the lower one, the carriage on the present system fell over, on meeting with the slight resistance offered by a gentleman's card placed upon the elevated rail; whilst, as has been shown by me at the Society of Arts, the one constructed on the geometrical principles, passes safely over at the like elevation, a piece of wood, one-eighth of an inch thick—which, at the scale of the models, one inch to a foot, is great. It also does not fall over from the impulse given by the *card*, until the elevation is 48 degrees—this accurately measured by a proper gauge. I had also a model to show that a carriage at rest, without the suspended pendulum, would fall over 8 degs. sooner, than when the pendulum was suspended. One gentleman made a remark, that railway sleepers never sunk to 22½ degrees—forgetting that, in order to ensure perfect safety, it is necessary to apply a testing power much greater than the limit ever expected to be arrived at. If a cannon was merely tested, and made safe to the exact amount of expansion necessary to project the ball intended for use, I fear it would be found worse than useless when applied to its intended purpose. Also, in steam-engine boilers, if they could bear no more pressure to the square inch, than that absolutely necessary to work the engine, many explosions would take place.

I might adduce many more instances of the same kind, such as—how chain cables are tested, to many times the amount of strain ever expected to be put on them,—but will refrain from doing so, as every one must see that, to ensure perfect safety in any contingency, we must prepare for much greater resistance than we expect to be required.

I beg now to conclude, taking this opportunity to return thanks to the council of the Society of Arts, for the kind manner in which they assisted me to bring my invention before the public. C. H. GREENHOW.

Cecil-street, Strand, February 26.

[We, in common with our corresponden', regret that the subject was not further discussed, but must say that, in some measure, such is to be attributed to Mr. Greenhow having closed his remarks (which will be found in another column) without making any direct reference to the models to which he refers, and hence we are led to infer that the chairman might be supposed to consider the discussion as brought to a close. We admit that a member rose for the purpose of putting some questions, whereby the discussion might, and, doubtless, would, have been resumed, and, as we think, with advantage; but Mr. Varley having rose on a point of order, addressed the chairman, expressing his opinion that enough had been said on the subject; the chairman at once fell into the views of that gentleman, and thus put a *terminus* to the *line* of discussion, which we can very well imagine would have been of a somewhat lengthened and interesting nature. That a misunderstanding existed, was fairly admitted by the secretary, who stated that he (on the part of the chairman) had endeavoured, on the previous evening, to sum up the evidence, and if not to have addressed the jury (the members and visitors), and at least may be said to have given his version of the law, and so allowed a verdict to be given against the appellant. It was, therefore, proposed to re-open the discussion, which we can only express our regret was not allowed to be continued. Our correspondent's supplementary paper, or notes, read at the meeting, which will be found in another place, will, however, be found to meet the objection raised. How far they may be effective, of course remains to be proved.]

GREENHOW'S GEOMETRICAL RAILWAY—SOCIETY OF ARTS.

SIR,—Having felt considerable interest in, and taken some pains to ascertain the true geometrical principles, with the advantages of Mr. Greenhow's invention, I attended again at the Society of Arts on Wednesday last, and, from the preparations the inventor had evidently made, I was in hopes that some of the parties, who so unceremoniously on the previous evening had set the plan down as an idle whim, would have been convinced that the advantages were not only not quite so imaginary as they would have made out, but that to some extent, at least, they did in reality exist. I was, however, exceedingly disappointed, and indeed surprised. Mr. Greenhow merely read a short paper, purporting to be an answer to Mr. Scott Russell's closing speech on the Wednesday previous, and, although the two descriptions of rail, with their carriages, were ready—by which he might have shown the superiority of his own in five minutes, in a way which, as far as models prove, could not have been refuted—he sat down, and gave up the only chance of putting himself right with the society. If Mr. Greenhow wishes to bring his plans fairly before the public, he must take bolder measures than he has hitherto done, and, by perseverance in right quarters, I have no doubt the merits of his invention will still be acknowledged, and his plan to some extent adopted.

Lambeth, Feb. 26. AN ENGINEER WHO LIKES FAIR PLAY.

MR. GREENHOW'S RAILWAY CARRIAGE.

SIR,—As a visitor of the Society of Arts, I regret that any observations of mine should have led to inconvenient questions at the last meeting. Happily for me, I was not one of the notes of interrogation there! That Mr. Greenhow was taken by surprise I have no doubt, but his thanks to me, personally, after the conclusion of the meeting, showed that he did not consider there was any discourtesy on *my* part; on the contrary, he appeared to have been very much obliged, by the enunciation of a *principle*, which will, perhaps, save him some hundreds, if not thousands, of pounds, in trying the experiment on a larger scale. It will be quite time enough for Mr. Greenhow to style others "*tyros* in science," when he has himself studied the first principles, which confounded him a great deal more than the "confusion worse confounded" consequent upon his own innocence, as to the resolution of forces. The whole matter lies in a nutshell, and it is this: Unless the vertical line from the centre of gravity falls without the line of the base, no body, however complicated the parts, will overturn itself from its base, whatever may be the centripetal or centrifugal force applied to such a body. A railway carriage, to all intents and purposes, is one body, which rests, or moves, on four points, the straight lines from which points form a quadrangle; therefore, Mr. Greenhow's "Reasoning falls, like an inverted cone, without a proper base to rest upon." Not only our principles, but the objectors themselves by name, are cited to the bar of public opinion; but, after the complaint of discourtesy, the argument *ad hominem* will not, of course, be resorted to, by one who is not himself "a *tyro* in science!" To prevent this, however, allow me also to remark, that the centres of suspension may have a centrifugal force, to say nothing of the leverage arising from their being so far raised above the centre of gravity. As we must sign our names, in order to be within the record, I remain, Sir, &c., A. T. J. MARTIN.

Bury-st., St. James's, Feb. 24.

COLEMAN'S LOCOMOTIVE ENGINE.—We have received from a correspondent the following notice of Mr. Coleman's invention:—It is for the purpose of enabling locomotive engines to ascend and descend inclined planes on railways, completely dispensing with cuttings and tunnels, and that, too, without the aid of stationary engines, or any of the contrivances at present resorted to—thus a considerable saving in the outlay is effected, amounting, in some instances, to as much as 150,000*l.* per mile, depending upon the surface of the country through which the railway passes. The arrangement consists merely of a number of horizontal rollers being placed between the rails of the gradient. An Archimedean screw is placed underneath, and travelling with the locomotive; when remaining on a level plane the screw is at rest, and the power of the engine is exerted, as in ordinary cases—viz., by the adhesion of the driving wheels to the rails; but the moment it arrives at the foot of the gradient, the driving wheels are lifted off the rail, and the whole power of the steam is exerted upon the screw—the thread of which being made to pass between the rollers, enables the engineer to ascend any gradient, no matter how steep, at the same time considerably increasing the power. A model has been made on a large scale, the rails being about 70 ft. long, and the rise of the gradient will be equal to 1000 ft. per mile.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

MONDAY	Cornubian Mining Company	office, at Two.
	Trewavas Mining Company	on the mine, at Twelve.
	Church of England Assurance	office, at Twelve.
	Kent Water-Works	George and Vulture, at Twelve.
	Belgian Eastern Junction Railway	Guildhall Coffee-house, at One.
TUESDAY	Thames Tunnel Company	London Tavern, at One.
	Dunstable Railway	Euston Station, at One.
	Hayle Railway Company	office, at Two.
WEDNESDAY	Trevilson Mining Company	Pearce's Hotel, Truro, at One.
	London and Westminster Bank	Bank, at One.
	European Life Insurance	office, at Twelve.
	British Colonial Bank and Loan Company	office, at One.
THURSDAY	Clerical, Medical, and General Life Assurance	office, at One.
	Chelsea Water-Works	office, at One.
	Legal and General Life Assurance	office, at One.
FRIDAY	Callington Mining Company	office, at One.
	Great Leinster and Munster Railway	London Tavern, at Twelve.
	Nister Dale Iron Company	office, at Two.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

IRISH WASTE LAND IMPROVEMENT SOCIETY.

The half-yearly general meeting of the shareholders in this undertaking was held at the King's Head Tavern, Poultry, on Thursday last, the 26th inst.

The Earl of DEVON in the chair.

Mr. FRY (the secretary) having read the advertisement convening the meeting, read the following directors' report:—

REPORT.

The directors of the Irish Waste Land Improvement Society now present to their proprietary the half-yearly report to the 31st of December last. The prices of agricultural produce for the year 1845 having exceeded those of the preceding year, the valuation of the society's crops and stock exhibit a consequent increase in the year's account.

The general failure of the potatoe crop of 1845, and the effects of such a calamity on the population of an island dependent on that produce for its existence, has engaged the earnest and zealous attention of the committee of management of your board of direction. The measures which have been taken to provide against and alleviate the pressure of extreme scarcity, as all other matters relating to the local details of the society's estates, will be read to you in the report of Col. Robinson, the managing director. Your directors are led to believe that the estates of the society have been less unfavourably visited with the awful malady than most other localities.

The fourth call, which was made on 2960 shares, has now been closed—viz., by payment upon 2769, and by forfeiture of the remaining 191 of such shares.—The directors have now fulfilled their contract with the proprietors of the estate of Tulligoline, having advanced for the improvement of its lands the stipulated sum of 3000*l.* This outlay producing 7 per cent. to the society, is the maximum advantage which can ever be derived from it; but as the objects of the society are to transfer its capital from place to place, combining their own advantage with the welfare of the country, your directors recommend that the beneficial interest in the lease of Tulligoline should be forthwith disposed of, and that thereupon a dividend of 5 per cent. on the paid-up capital of the proprietorship be declared. The three other estates are of increasing rental at periodical intervals, receiving additional sums for improvement from the accruing products of the applied surplus of income the estates afford; and when the whole advances, which, under judicious application these other estates may reasonably bear, shall have been made, they will be in a fit state to offer for sale, with advantage to the proprietary, and in pursuance of their Act of Incorporation.

The directors propose now to treat for other extensive tracts of waste lands in Ireland, and to pursue their course of beneficial advantage to the society, and that country under its present alarming difficulties, with earnestness and increased hopes of success. The directors consider that the operations of the society have now reached the point of proving, from practical experience, that an opening is made for the surplus labour of the Irish peasantry, far exceeding in its advantages any encouragement which emigration holds out; this was the principle on which the prospectus of the Irish Waste Land Improvement Society was founded—the soundness of which your directors consider to be now firmly established. The report of her Majesty's Commissioners, for inquiring into the occupation of land in Ireland, the public journals, and numerous agricultural writers, have borne their testimony to the same effect; and, as a bill is now passing through Parliament, which specially enables such a society to receive loans for agricultural improvements, the directors propose, with the sanction of the shareholders, to avail themselves of its provisions for the purpose of obtaining funds to assist in the extension of their works of improvement. The directors have now to call the attention of the proprietors to the arrangement made with Col. Robinson, upon his appointment to the management of the estates in the year 1842, to the increased duties which have devolved upon him in carrying out that management, and the very inadequate remuneration he at present receives, in proportion to the services rendered to the society, on which subject it is the intention of the directors to submit a resolution to the meeting.

From the abstract of the accounts, which accompany this report, it will be seen that the balance of cash in hand on the 31st of December last, was 256*l.* 5s. 6d.; and the balance of assets and liabilities to the same date, 11,411*l.* 9s. 8d. A vacancy has occurred in the direction by the retirement of Edward Joshua Cooper, Esq., which, agreeably to the Act of Incorporation, must now be supplied; and, in addition, John Fetherston, Henry Handley, and Daniel Robinson, Esqs., retire by rotation, but are eligible, and offer themselves for re-election.

Col. ROBINSON (the managing director) then read a very long report, on the past proceedings, the present state, and future prospects of the company's estates: it stated that in March last several fresh works had been proceeded with, some of which were completed and let, and the others would be continued in the spring, with, he had no doubt, equal results. With respect to drainage, stone drains were preferred, and though more expensive at first, were the most economical in the end. The report then entered on the subject of potatoes; it stated that since 1842 the society's stewards had endeavoured, by every means, to induce the tenants to try rotation crops, and not to rely on that one vegetable—the potatoe. It was a difficult matter to alter the habits of the Irish peasantry, but some of them had become converts; they began to have confidence in the society, and to consider its members their friends and well-wishers. During the summer of 1845, the potatoe crop was in excellent and most promising condition, the other crops were also propitious, and, with respect to the the oats, if there was anything to complain of, it was that they were too heavy. In September, advices arrived from Belgium, of the disease in the potatoe, and inspection was immediately made of every potatoe field on the company's estate, orders were given to root out every plant which showed bad symptoms, and printed instructions, for the conversion of partially decayed roots for food, circulated among the tenantry; the quantity lost among them was small, compared with the whole, and if the disease does not increase, they will retain both for food and seed, nearly as much as in average years. Measures had been taken to secure, to all who should require it, employment and food until the harvest. Since last year the number of tenants had increased 11 per cent.; the number of acres, under cultivation, had increased 12 per cent.; the amount of rental, 10 per cent.; value of tenants' improvements, 18½ per cent.; value of tenants' property, 14 per cent.; increase of cattle, &c., 10 per cent.; and the expenses of the society had decreased 10 per cent. In rent, and in loans to the tenants, there were no arrears. Sir John Burke had relinquished a moiety of his rent for a number of years, and had directed that one-half of it should be given away in prizes. The Government had consented to advance 1600*l.* towards the construction of a road through the Kilkerrin estate, the county would advance 1000*l.*, and the society was to give 400*l.*—part of which, however, would be paid by Mr. Martin, an adjoining land owner. The report then went at great length into statistical details of the company's four estates, as to population, quantity of land under cultivation, return, expenses, &c.; and gave great satisfaction to the meeting, which, by the way, was more numerously attended than usual.

The CHAIRMAN, calling on some gentleman to move the reports, observed, that the one they had just heard was highly gratifying; it was not a fanciful one, but founded on facts and accounts, kept by competent persons on the spot, under the directions of Col. Robinson, tended to show the legitimate manner in which capital, by care and perseverance, may be employed in Ireland, not only to avert the evil of which they had heard so much—not only for present relief—but to enable them to look forward to better things in Ireland, both in a physical and moral point of view. Of such benefit had been the course pursued by the society, that not one individual among the tenants had ever had to appear before a magistrate, to answer for any serious misconduct, nor had any one yet had to enter a poor-house. He hoped not one word of Col. Robinson's report would be lost on any one, who had an interest in the land, and the welfare of Ireland.

It was then moved by the Rev. Mr. HAMILTON, seconded by Mr. PEARCE, and carried unanimously, "That the reports be received, adopted, and printed for circulation."

The CHAIRMAN then alluded to the Public Works (in Ireland) Act, passed in the reign of William IV., which authorised advances of money to individuals by the Government for agricultural improvements, but its terms were so onerous that few had availed themselves of it. A bill to amend this Act had passed the Commons, and he believed would pass the House of Lords that day. This would enable societies, as well as individuals, to borrow upon easier terms; and the directors thought it would be advisable to avail themselves of this means of raising capital, for the purpose of extending their operations. The Government, if it felt disposed, might make this society a most useful means of benefitting Ireland.—It was then moved by Mr. BLOUNT, seconded by Mr. J. S. BUCKINGHAM, and carried unanimously—"That the directors be authorised to borrow a sum of money on mortgage, or assignment, of all, or any part, of the company's property."—The CHAIRMAN stated, that before they availed themselves of this authority, they should call a special meeting as soon as they found an opportunity of investing further capital to advantage.

A resolution was then unanimously passed, augmenting the remuneration to Colonel Robinson by 100*l.* per year, in consequence of his increased labours,—and several gentlemen bore testimony to the tact, perseverance, and zeal, with which that gentleman managed the tenants, and the property.—Captain G. Denny was then elected a director in the room of E. J. Cooper, Esq. Messrs. Feathuston, Handley, and Robinson, who retired in rotation, were re-elected directors; and a vote of thanks having been passed with acclamation to the chairman, his lordship replied, and the meeting separated.

GENERAL STEAM NAVIGATION COMPANY.—On Tuesday, the half-yearly meeting of this company was held at the offices, in Lombard-street.—In the absence of Wolverley Attwood, Esq., the chair was taken by — WILKIN, Esq. —The SECRETARY read a very flattering report of the company's proceedings during the half-year, from which it appeared that a large surplus remained over the expenditure, which was appropriated to the usual dividend, and a bonus of 2s. 6d. per share—the residue being applied to the deterioration fund, and to the building of new vessels.—The proposition being made of a 1000*l.* gratuity to the secretary, a PROPRIETOR asked, what was his salary? —The CHAIRMAN replied, 1000*l.* a year, which he had for 10 years.—Several proprietors seemed to be taken by surprise that such a sum was awarded without giving them previous notice, and although the meeting was composed of about 100 persons, only about half a dozen hands were held up for the resolution, which was proposed by the CHAIRMAN, and seconded by Mr ATTWOOD.—The resolution was therefore passed, and, after a vote of thanks to the directors, the meeting separated.

Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

Society.	*Address.*	*Day.*	*Hour.*
Entomological	17, Old Bond-street	Monday	8 P.M.
Chemical	Society of Arts, Adelphi	Monday	8 P.M.
Medical	Bolt-court, Fleet-street	Monday	8 P.M.
Medical and Chirurgical	53, Berners-street	Monday	2 P.M.
Linnæan	Soho-square	Tuesday	8 P.M.
Horticultural	21, Regent-street	Tuesday	3 P.M.
Civil Engineers	25, Great George-street	Tuesday	8 P.M.
Syro-Egyptian	71, Mortimer-st. Cav.-sq.	Tuesday	8 P.M.
Society of Arts	Adelphi	Wednesday	8 P.M.
Zoological	11, Hanover-square	Thursday	8½ P.M.
Royal	Somerset-house	Thursday	8½ P.M.
Antiquaries	Somerset-house	Thursday	8 P.M.
Royal Institution	Albemarle-street	Friday	8 P.M.
Botanical	20, Bedford-st., Cov.-gar.	Friday	8 P.M.
Asiatic	14, Grafton-street	Saturday	2 P.M.
Royal Botanical	Regent's-park	Saturday	4 P.M.
Westminster Medical	32, Sackville-street	Saturday	8 P.M.

INSTITUTION OF CIVIL ENGINEERS.

FEB. 24.—The President (Sir JOHN RENNIE), in the chair.

The first paper read was a "Description of the Dinting Vale Viaduct on the line of the Sheffield and Manchester Railway," by A. S. Jee, M. Inst. C. E. —This viaduct consists of 16 arches, 5 of which are of timber, and 11 of brick. The whole of the large pins, wings, outside spandrils, and parapets, are built of stone from the quarries in the neighbourhood. The five large arches, which are each of 125 ft. span, and 25 ft. versed sine, are built of Memel timber; the main ribs of these arches are composed of planking, 3 in. thick, bent and laid longitudinally, and fastened together with oak trenails, and firmly stayed by means of wrought-iron tie rods. The smaller semicircular arches, situated at each end of the viaduct, are built of brick, with stone quoins. They are of 50 ft. in the span, and 3 ft. in thickness, and are built in a curve of 40 chains radius, the piers being wedge-shaped, to suit the curve, leaving the faces parallel with each other. The entire cost of the viaduct (which was given in its various details in the paper) was stated to be 35,250*l.* 6s. 5d.; its total length 484 yards; and its greatest height about 125 ft. above the water course. It was commenced early in 1843, and was opened on the 8th August, 1844. The average cost of construction was calculated to be about 2*l.* 14s. per superficial yard, and 6s. 9d. per cubic yard, the viaduct being eight yards in width.—The paper by Mr. G. W. Hemans, M. Inst. C. E., described the system invented by Sir John Macneill, and employed on the Dublin and Drogheda Railway, for preparing the transverse sleepers and fastening the rails upon them. The sleepers are half baulks, 12 inches by 6 inches at the junction of the rails, and intermediately half trees of larch with the bark on, not less than 8 inches by 4 inches are placed with the round side upwards, at an average distance of 2 feet 6 inches apart. These sleepers are prepared for bearing the rails, by fixing 12 at a time on a sliding table, similar to that of a planning machine; they are moved forward by steam power beneath two circular cutters set, at the given distance of the gauge, apart, and revolving very rapidly, and which pass through the whole series of sleepers, cutting, at a given inclination, the seats for the rails: a slight stoppage of the table takes place as each sleeper is cut, in order to afford time for 4 drills to descend simultaneously, and to pierce the holes for the pins or trenails for holding down the rails. An engine of six-horse power suffices for working two of these machines, by which 1000 sleepers can be finished complete in 24 hours, at an expense of about one penny each, instead of twopence halfpenny each, which they formerly cost by manual labour. The sleepers thus prepared are used transversely beneath the rails of the bridge, from which the sides are slightly pinched inwards in finishing, so as to form a dove-tail, with a joint-plate with a raised rib, which is laid at each junction, and which, by using a screw-pin and plate at one end, and a collar-headed pin at the other, holds the rail very fast, preventing lateral and vertical motion, but permitting longitudinal action in expansion and contraction. These rails weigh 83 lb per yard. The total cost per mile of the double line, including rails, sleepers, pins, spikes, joint chains, &c., laid complete, is stated at 3470*l.* 2s. 8d., when the rails cost 7*l.* 5s. per ton.—The paper by Mr. W. Vanderkeite, Assoc. Inst. C. E. described a very useful arrangement of machinery for working the diving bell used in setting the masonry, at a depth of about 8 feet, below the level of extraordinary spring tides, in the extension of the pier at Kilrush, in the river Shannon, under the direction of Mr. T. Rhodes, the chief engineer of the Shannon Commissioners. Upon a set of piles and longitudinal timbers, a railway was laid, upon which two travelling platforms were constructed, with winches, &c. One of them brought the stone nearly over its intended position, and lowered it into the sea; the other then brought the diving-bell over it, and by means of a chain and purchase the stone was lifted and placed properly in its place by the man in the bell. This work was continued through all seasons, and with the utmost regularity, and the work so constructed was as solid as if built on dry land. The drawings accompanying the paper gave all the details of the machinery.

SOCIETY OF ARTS.

FEB. 25.—WM. HENRY BODKIN, M.P., (Vice-President), in the chair.

The first paper read was by Mr. T. R. Crampton, on a new form of locomotive steam-engine, the object being to prevent rocking and vibratory motion, and to obtain the advantage of large driving wheels, without increasing the height of the centre of gravity. The principal features of Mr. Crampton's invention, are—First, The driving wheels are placed at the fire-box end of the boiler, so that the wheels may be made of any height, without raising the centre of gravity of the engine. He thus obtains a lower centre of gravity, and greater stability of the engine, than is the case in any of the usual forms; he thus also obtains a constant weight on his driving wheels, which it is not in the power of the engine-man injuriously to alter. He conceives also, that, by placing the driving wheels behind the extremity of the boiler, greater steadiness would be given from the absence of overhanging weight. With these essential changes, the remainder of the working parts of the ordinary engine may be maintained without any other alteration in their position.

A long discussion ensued, with the various practical engineers and scientific gentlemen present, on the value of each of these specific arrangements, on the value of large wheels and high velocities, and on the importance of the position of the centre of gravity. Mr. Crampton's communication was regarded as very important, and his construction of the engine, as one which merits a trial.

The second paper read was by Dr. Ritterbrandt, on the formation of incrustations on steam boilers, and on the means of preventing it.

In the first part of the paper, he shows that incrustation is the cause of the majority of steam-boiler explosions. Secondly, that incrustation is incompatible with the economical use of fuel. Thirdly, that incrustration rapidly destroys the boilers—the extra heat, necessary to raise water to a given point, greatly increasing oxidation, or scaling; and, fourthly, that incrustration is a source of serious expenditure, by rendering labour necessary to remove it, and by the destruction of the boiler, to which this mechanical removal gives rise. In order to obviate these difficulties, Dr. Ritterbrandt proposes to use the *salts of ammonia*, it being known that, if to a soluble salt of lime be added a solution of carbonate of ammonia, precipitation takes place; and the acid, which held in solution the lime, unites with the ammonia, while the carbonic acid of the carbonate of ammonia combines, and falls down, with the lime; but, upon the water being heated, the precipitated carbonate of lime combines with the salt of ammonia, is redissolved, and the carbonate of ammonia is formed, and escapes with the vapour of the boiling water. On feeling convinced that this peculiar re-action took place—viz., that carbonate of lime, precipitated from a salt of lime by muriate of ammonia, would be again dissolved by the application of heat—it only remained to be proved how far this principle was applicable to decompose the carbonate of lime already existing in calcareous water; and the results exceeded the most sanguine expectations. However highly charged with lime the water may be, the process answers, and the solution is, in all cases, perfect. The *rationale* of the chemical re-action is thus explained: —Muriate of ammonia consists of muriatic acid and ammonia; carbonate of lime, of carbonic acid and lime—on uniting with the water in the boiler, a double decomposition and recombination ensues; the carbonic acid of the carbonate of lime unites with the ammonia of the muriate of ammonia, forming carbonate of ammonia, one of the most volatile salts; while the muriatic acid unites with the lime of the carbonate of lime, forming muriate of lime, or chloride of calcium, which, being a perfectly soluble salt, is chemically held in suspension in the water, and cannot form incrustation. Several gentlemen present bore testimony to the value of the invention, and the further discussion of the subject was postponed.

THE ATMOSPHERIC RAILWAY FROM LA GARE TO ST. OUEN, NEAR PARIS.—Last week, M. Legrand, Under-Secretary of State in the Department of Public Works, visited this railway on Hediard's atmospheric system, which is now being completed to St. Ouen; and being only as a trial, its length at present will not exceed a mile and a half. An engine of 40 to 45-horse power, causes the vacuum in the tube; but the method on the whole does not materially differ from the other atmospheric railways, except by the valve, which forms the slit in the tube. This valve is composed of two sheets of steel of a very flexible nature.

CRAMPTON'S PATENT LOCOMOTIVE ENGINE.

Ever since the first introduction of that master-piece of human ingenuity—the locomotive steam-engine—continual exertions have been made by the most scientific and practical engineers to render it as near perfection as possible; to lessen the consumption of fuel, to obtain at the same time the greatest amount of power of which the machine is capable, and, above all, to secure the safety of the engine and the trains. Notwithstanding the great improvements which have taken place, there still remains one evil which, although of different degree in various engines, has never been got rid of—viz., oscillation; trifling at low speed, but very often of fearful amount when the engine travels at high velocities.—The object of the patentee in the present invention is, to prevent this oscillation by lowering the centre of gravity, and, at the same time, secure the advantages of high driving wheels; and it appears to us evident that he has completely succeeded: the actual advantages gained, of course, can only be ascertained on the completion and trial of a locomotive on his plan. A paper was read at the Society of Arts, on Wednesday evening last, descriptive of the *principle*, which met with very general approbation of the members present. The present six-wheel locomotives have the driving wheels in the centre, and the principal weight of the engine being thus thrown off the ends, together with the centre of gravity being too high in proportion to the breadth of the entire mass, tends to that vibratory motion of which such complaint is made. In the last improvement made by Mr. Robert Stephenson, he places the driving wheels at the hinder end of the barrel of the boiler, inside the fire-box,—and beneath the boiler he places the crank and axle; the fore part being supported by the four bearing wheels; and, though greater stability is thus acquired, the evil is not got rid of, owing in a great measure to the centre of gravity still remaining as high as before, and the fire and smoke-boxes overhanging. In Mr. Crampton's new patent locomotive engine,—the driving wheels of which are 8 ft. high,—they are placed at the hinder extremity of the machine, and one pair of the bearing wheels at the extreme front—thus securing a complete longitudinal support between the two axles, and either one or two pairs more bearing wheels may be introduced for the central support. The cylinders are outside; the centre of gravity is lowered at least 1 ft., in comparison with locomotives as at present constructed; the size of the driving wheel does not interfere at all with the height of the boiler. All the details of the machinery, which can by any possibility be adopted in the present engines, can be fully and most advantageously carried out in this, and one great advantage in the new machine is, that the valves and every part of the machinery is within the reach and inspection of the engineer. An interesting discussion arose as to the alterations which had taken place in the height of the driving wheels on the several lines. It appeared that, on the narrow gauge lines, they had been gradually increased from 5 ft. to the present size, 6½ ft. —while on the Great Western they commenced with 10 ft., were gradually reduced to 6 ft., and then increased to their present size, 7 ft.; but, Mr. Crampton explained, that the reduction was made in consequence of the first engines made on the Great Western line, not having enough heating surface to raise a power sufficient to drive large wheels; such would not be the case with the present locomotives. It was suggested that, with such large driving wheels at the extremity of the engines, there would be great danger on backing of running off—a large wheel having a greater tendency to such result than a small one; but Mr. Crampton, upon the suggestion being made, stated that experience shows that no practical evil existed on those engines with the driving-wheel behind, and was so convinced of the superiority of having the main bearing points at the extremities, that he should like to make one with the large driving wheels in front. Mr. Gooch, superintendent of the locomotive department of the South-Western Railway, entered into a disquisition on some technical points connected with the working of the valves, under the circumstances of the low position of the engine and situation of the cylinders; but, eventually, acknowledged that he could not sustain any objection to the theory. Several engineers addressed the meeting, and it was evident Mr. Crampton's views were generally reciprocated: indeed, it was apparent, from the manner in which Mr. Crampton met the various queries, put by the practical engineers, who took part in the discussion, that he is not only quite conversant with the theory of the locomotive, but has a perfect knowledge of the practical detail of the machine; otherwise, he never could have so clearly answered the questions put by such men as Mr. Gooch.

The thanks of the society were unanimously passed to Mr. Crampton, for the valuable information contained in his paper, &c.

GREENHOW'S GEOMETRICAL RAILWAY.

In the *Mining Journal*, of Saturday last, we gave several communications on this subject, as relating to the proceedings at the Society of Arts, on the Wednesday previous. Some further correspondence will be found in our present Number, and the following is a paper read by Mr. Greenhow, on Wednesday last, in reply to the concluding remarks of Mr. Scott Russell, the secretary. A model of a carriage, with flange wheels, and a square rail, was prepared and laid on the table, with Mr. Greenhow's original models, but we regret that, the subject having been previously discussed, the rules of the society did not admit of further experiment on the occasion:—"Before proceeding to the discussion of this subject, I beg to be allowed to make a few remarks in reply to the concluding address of Mr. Russell, on the last evening. I feel convinced that had he given the subject due consideration beforehand, he would not have stated what he did. In the first place, he said that the centrifugal force had never been known to throw a train off the line—now, had he considered, he would have seen that the whole danger to bodies rapidly moving, is from this force, because any diversion given to it disarranges the balance of the forces called into action by the motion, allowing the attraction of gravity to step in and throw the carriage over; I need not instance any of the accidents which have occurred, as it must be obvious to every one how much increased speed endangers the safety. When a person is running, should he trip over a stone and fall, what is it but the centrifugal force that throws him down. Next, I proceed to the suspension of the pendulum; had I been allowed to explain, I would have shown that this suspension is *not* to provide for the safety of the carriage when at rest, but to assist in preventing the re-action upon each other of the forces called into operation, by making it move so rapidly as to become subject to the laws of projectiles. To enable me to do this, and give security to the passengers, I have taken advantage of some of the most beautiful laws of Nature; in exactly the same proportion to the increase of the projectile or centrifugal force, within a fixed distance, does the effect of the attraction of gravity diminish—the amount always being the same, in the like space of time, and in a ratio proportionate to the distance traversed in a definite space of time, is the relative preponderance of the centrifugal force over that of gravitation, and could sufficient impulse be given, the train would leave the surface, flying off at a tangent. This is so simple and self-evident an axiom, that every schoolboy knows it; I dare say you will all remember, when boys, sliding swiftly across a piece of frozen water, which was not sufficiently strong to have borne half your weight, had not the rapidity of the projectile force carried you across in too short a time to allow the gravitation to act in full force. When the speed of a train is rapid, the influence of the attraction of gravity in a fixed or given distance, is comparatively diminished, and the moving body, in obedience to the laws of projectiles, has a tendency to revolve on its own axis; this, I consider, one of the causes of the oscillation which takes place. It is in resisting this tendency that the great advantage of the pendulum is apparent, on an impulse being received to throw the top of the carriage to either side, the same impulse gives an impetus to the pendulum, whose centre of oscillation being above the centre of the body moving, it completely counteracts and prevents this tendency to turn over. Next, as to friction, I am convinced that the advantage is considerably in favour of the round rail. One body sustaining another must receive its weight directly perpendicular to the surface; therefore it can only be within a small limit on each side of the point perpendicular to the centre of the rail that the pressure is thrown, and beyond that point the number of degrees in the concave tyre, which approach the convex surface of the rails, do not come in forcible contact, but approach to, and are withdrawn from, each other, the touch being merely nominal, excepting when, for a moment, a resistance is to be made to an attempt at lateral displacement. The remark about two circles of different diameters, revolving on the same axis, does not apply in this instance, as the pressure is not at the extremities, but on a point placed between them; had it been equal at every degree in the segment of the circle described by the concave tyre, the friction would then have been tremendous. Next, I will say only a single word in favour of the oblique spoke; had it been perpendicular to the centre of the rail, directly one side of the carriage became elevated, the lower wheel would have been withdrawn from the rail on which it rested, in similar manner to lifting a ball out of a cup, but by throwing the spoke inwards, the leverage on the tyre gives it an inclination to revolve back to its former position.

EXPENSES OF CONSTRUCTING LOCOMOTIVE AND ATMOSPHERIC RAILWAYS.

The *Presse* publishes the following statement relative to the comparative expense of the construction of an ordinary railroad served by locomotives, and of an atmospheric railroad:—"The expense of a kilometre of a railroad served by locomotives, according to a calculation made by the directors of the Orleans, Rouen, and other railroads, is as follows:—

Purchase of land	*Francs* 40,000
Embankments	41,000
Works of art	31,000
Double line of rails	104,000
Workshops and coach-houses	9,000
Locomotives	23,000
Expenses of direction, including station-houses, &c.	59,000
Total for a kilometre	307,000

A kilometre of atmospheric railroad is composed of the following items:—

A tube weighing 192 kil. the metre, at 25 f. the 100 kil.	48,165
Valves, leather, tallow, &c.	26,410
Composition for the inside of the tube	1,150
Piston for a kilometre	275
Tube of aspiration	2,000
Steam-engine	30,000
Embankments	14,000
Purchase of land	16,000
Works of art	21,000
A single line of rails	48,000
Workshops	6,000
Waggons, ballast, &c.	59,000
Station-houses for signal men	35,000
Total for a kilometre	*Francs* 307,000

Being precisely the expense of a kilometre of railroad served by locomotives. This calculation is taken from a report presented to the Minister of Public Works by M. Mallet, appointed to examine the atmospheric railroads in England."

NEW PROPELLER FOR STEAMERS.—By her Majesty's Royal Letters Patent.—The PROPRIETORS of PARKHURST'S SUBMERGED PROPELLERS invite the attention of steam-boat proprietors and shipbuilders to this important invention, which is admirably adapted for propelling vessels, of every size and description, by sea, rivers, lakes, and canals. This novel and beautiful invention possesses many advantages over every method now used for propelling vessels by steam.

The inventor, who has been practically engaged for 20 years in water-wheel power and other machinery, assumes that, by the application of these submerged propellers—

One-half may be saved in the cost and consumption of coal.
One-half in the engine-power.
One-half of the above gained for freight and passage room. 33
One-third gained in speed.
The paddle-box, with all its weighty and ponderous machinery, done away with.

These propellers are submerged, and out of gun-shot reach, and not liable to damage by ice, &c.

They can be applied to any steamer now running, without any material alteration of her engines; and also added to any ship, barque, or schooner, now sailing under canvas, at a moderate expense.

A model of this invention may be seen at Messrs. WILLMER and SMITH'S, shipping agents, Liverpool, from whom every information may be obtained.

COMPRESSED AIR-ENGINE COMPANY.
No. 5, PALL-MALL EAST, LONDON.
(PARSEY, PATENTEE.) 34

Numerous inquiries having been made by persons applying for shares in this company as to the extent of their liability, the directors now feel that the number of shares applied for will yield sufficient funds for all necessary purposes, and justifies them in stating, that no further call, beyond the first deposit of £1 1s. per share, will be made.

The working model is in operation, and open to inspection, at the offices of the company, No. 5, Pall-mall East, between the hours of Eleven and Four daily, where prospectuses and forms of application for shares may be had.

By order,
D. E. AUSTIN, Secretary.

PILBROW'S ATMOSPHERIC RAILWAY AND CANAL PROPULSION COMPANY.—Completely Registered.
DIRECTORS.
The Right Hon. the Earl of ESSEX, Chairman.
The Right Hon. the Earl of Bessborough | Lieutenant-Colonel Gilliess
G. B. Bolton, Esq. | F. J. Lambert, Esq. 35
Dr. J. G. Hewlett, Resident Director

Directors of Railway and Canal Companies are informed that this company is now READY to GRANT LICENSES FOR, or SUPERINTEND the LAYING DOWN of LINES on PILBROW'S ATMOSPHERIC PRINCIPLE.

The advantages offered by this method of propulsion are cheapness, increased speed, and safety, over every other existing system, whether locomotive or atmospheric. Leakage is entirely avoided, the tube being buried. Also an immense saving, as well in the construction as in the working of lines, not requiring tunnelling, levelling, or embankment. The surface requires but little more preparation than for the common roads.

The application of this method of propulsion to Canal Navigation will be attended with incalculable advantages.

Its superiority, efficiency, and simplicity, will be demonstrated, and explanations given, at the offices of the company, 6, King William-street, London-bridge.

CHARLES COLLINS, Secretary.

UNIVERSAL GAS LIGHT COMPANY.
Capital £100,000, in 5000 shares, of £20 per share.—Deposit 2s. per share, in accordance with the Act.—(Provisionally Registered.)

N.B.—*An Allotment of Shares will take place on the 16th of March next ensuing.*

Names of the Working Committee, in whose hands the affairs of the Company are placed until fully registered.

William Stiles, Esq.	Professor Ryan, M.D., LL.D.
Captain Kenyon	Robert Nicholson, Esq.
Henry Francis, Esq., patentee	Dominique Causse, Esq.
Joseph Peplow, Esq.	Henry Ault, Esq.
Charles Brooke, Esq.	John Kissick, Esq. 36

SOLICITOR—J. F. W. Fesenmeyer, Esq.
BANKERS—Sir Claude Scott, Bart., and Co.

This company is formed for the purpose of carrying out, and bringing into general use, an invention (secured by letters patent) for an improved manufacture of gas, of a superior quality, and at much less expense than the usual cost, by an apparatus so simple in construction, and so compendious in form, as to be available in any building or situation where the ordinary supplies of gas are not accessible.

Full details in prospectus, which may be had at the offices of the company, 159, Drury-lane, with forms of application for shares, and where may be seen the apparatus at work, and the brilliancy of the gas exemplified. Mr. William Nicholson, Secretary, to whom must be made all communications, post free.

UNIVERSAL GAS LIGHT COMPANY.—CONTRACTS TAKEN for LIGHTING UP, with a SUPERIOR GAS, and at a REDUCED RATE—towns, villages, lighthouses, dockyards, hospitals, theatres, public offices, manufactories, printing-offices, prisons, barracks, railway stations, asylums, schools, and other large buildings, where the ordinary gas is not accessable.—Letters to be addressed to Mr. William Nicholson, secretary, 159, Drury-lane. 37

SEYSSEL ASPHALTE COMPANY—CLARIDGE'S PATENT.—ESTABLISHED MARCH, 1838,
FOR WORKING THE MINERAL ASPHALTE ROCK OF PYRIMONT SEYSSEL,
A Bituminous Rock, situate on the Eastern side of the Jura.

PRINCIPAL DEPOTS:
ROUEN, MARSEILLES, AND STANGATE,
Surrey Side of Westminster-bridge, London.

The ASPHALTE OF SEYSSEL has been EXTENSIVELY USED, since March, 1838, for the following useful purposes:—

FOOT PAVEMENTS (public and other)	MALT-HOUSE FLOORS
KITCHEN FLOORS	PIGGERIES, &c. 38
BASEMENTS—where it is essential to keep damps from rising	COVERING OF RAILROAD and OTHER ARCHES
GARDEN WALKS and TERRACES	The only effectual mode to prevent the percolation of water, which also renders it very appropriate for the
CARRIAGE DRIVES	LINING OF TANKS, FISH PONDS,
COACH-HOUSES and STABLING	DRAINS, &c. &c.
DOG KENNELS	
BARN FLOORS	
TUN ROOM FLOORS	

Note.—The Seyssel Asphalte Company are prepared to enter into special contracts for the execution of railway work, and other public works of magnitude.

I. FARRELL, Secretary, Seyssel Asphalte Company, Stangate, London.

HALEY'S PATENT LIFTING JACK.
MANUFACTURED SOLELY BY
W. & J. GALLOWAY, ENGINEERS,
KNOT MILL IRON-WORKS, MANCHESTER. 39

The attention of parties who employ LIFTING JACKS, is respectfully requested to the superiority of the above over those hitherto in use. It will lift either at the top or below—having a claw, the same as the rack jack. Its parts are made in the most accurate manner—*each working piece being engineed.* Notwithstanding its superiority, in point of workmanship, and combining utility, safety, durability, and neatness, the cost is not more than that of the rack jack, of rude manufacture.

Amongst the advantages which it possesses, the following may be enumerated:—

1. It is about *half the weight* of the ordinary rack jack of equal power.

*** This is most important, as the ponderous nature of the rack jack is one of the main objections to it, requiring *two*, and often *three*, men to carry one of moderate power; whereas, one of the improved jacks (capable of lifting five tons), can be borne with ease by *one* man.

2. The handle (working similar to the rack jack) *may be let go with the lift on*; and although it has neither ratchet wheels or any other mode of securing it, it will not run back, but remains stationary, and quite safe.

3. Its parts are few, and simple (made entirely of wrought-iron, and case-hardened).

PRICES.

No. 2 size	—to lift 2 tons	£6	0	0
„ 3 „	„ 4 „	7	0	0
„ 4 „	„ 8 „	9	10	0
„ 5 „	„ 12 „	12	0	0
„ 6 „	„ 16 „	15	0	0

ATMOSPHERIC RAILWAYS.

TO RAILWAY COMPANIES, ENGINEERS, MANUFACTURERS, IRONMASTERS, AND TO ALL OTHERS WHOM IT MAY CONCERN.

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